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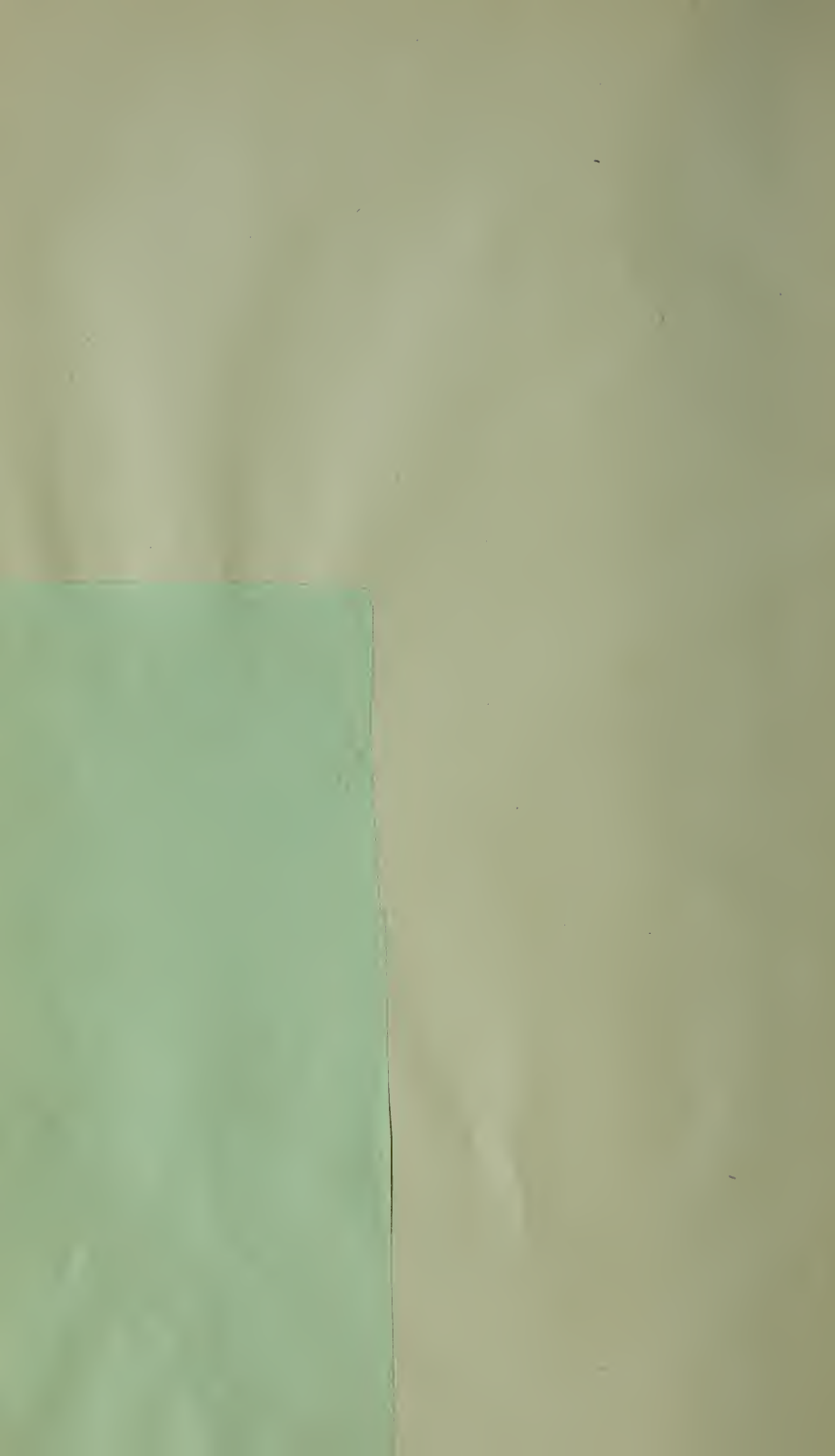
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NUMBER 6

REPORTS OF THE PRESIDENT AND THE TREASURER OF HARVARD COLLEGE 1909-10



Published by the University
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OF
THE PRESIDENT AND THE TREASURER
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PRESIDENT'S REPORT FOR 1909-10

TO THE BOARD OF OVERSEERS:—

The President has the honor to submit the following Report for the academic year 1909-10:—

Never in so short a period has the University lost from its rolls by death so many men of eminence as in the last academic year. Professors Charles Gross and James Barr Ames died before the last report was written. Not long afterward Mr. Alexander Agassiz died at sea as he was returning from Europe in apparently good health. Retiring by nature, his scientific attainments were more fully recognized in Europe than at Cambridge, where, however, he has left in the Museum of Comparative Zoölogy an unequalled monument of his knowledge, his force of character, his generosity, and of that manifold capacity in every field of human effort without which such an institution could not have been created. On August 26th, Professor William James died at Chocorua. For some years ill health had prevented his taking an active part in teaching, but the memory of his services and his world-wide reputation as a philosopher and man of letters reflected, and still reflects, a lustre upon the University. Earlier in the year, on March 16th, Professor Morris Hicky Morgan died after an illness of some months, leaving a gap in the ranks of classical scholars keenly felt throughout the country; and on March 25th, Henry Augustus Torrey, Assistant Professor of Chemistry, died at an age when his achievements gave promise of an eminent career.

Closing a devoted service to the University of forty years, Professor John Trowbridge tendered his resignation as Rumford Professor and Lecturer on the Application of Science to the Useful Arts, and Director of the Jefferson Physical Laboratory, to take effect on September 1. His work in teaching, in developing the laboratory, in selecting and inspiring his younger colleagues, has helped to build up a department of extraordinary

power, and in appointing him Professor Emeritus and Honorary Director of the Laboratory, it is hoped that his labors in research will be continued.

The new regulations for the choice of courses of study by undergraduates go into effect with the class entering college in 1910.¹ These rules contemplate, not merely a more effective concentration and distribution of college studies in accordance with the principles laid down by the Faculty, but also a more thoughtful and systematic planning of college work on the part of every student. It is essential that the undergraduates should reflect seriously upon the relation of their different courses to one another, and upon the bearing of the work of one year on that of the next. For this purpose it is important that they should discuss the matter with older men who are in the habit of considering college work as a whole, and that they should do so, not perfunctorily or hurriedly with advisers who have many students consulting them, but with instructors who have a small enough number under their charge to give to each one the time required. With that object every member of the Faculty, unless specially excused, is expected to confer with four or five members of the entering class, discussing with them at the outset their choice of electives for the Freshman year, and in the following spring their plan of studies for the rest of their college course. Such a duty lays an additional burden upon the members of the Faculty, but they have accepted it heartily and the closer contact with them will be an inestimable benefit to the undergraduates.

In this connection it may be noted that Mr. Castle, the Assistant Dean, recognizing that Freshmen need advice upon other sides of college life as well as in their studies, has organized a large body of volunteer Senior advisers, each of whom confers with a few members of the entering class. The sense of responsibility of the upper classmen, and their readiness to help the newcomers to start aright, are among the most encouraging signs of the times.

In discussing the new regulations for the courses of study, in the last annual report, a reference was made to the inability of

¹ These regulations are printed in the appendix to the last annual report, on pages 48-50.

students to read French and German, and the matter was said to be under consideration. The Faculty subsequently adopted an order, printed in the following report of Dean Briggs, whereby no student hereafter entering college shall be registered as a Junior until he has passed an oral examination in reading ordinary French or German. Such a requirement is now enforced for both languages in some other institutions, but the Faculty thought it wise to demand at first a reading knowledge of one of them alone. Nominally the provision entails no increase in the requirements for a degree, because every student is already obliged to pass an entrance examination, or to take college courses, in both languages. Practically, however, it has been found that an undergraduate after complying with these conditions is commonly unable to use with ease French or German books in his college work. Quite apart, moreover, from the benefit of knowing modern foreign languages, an oral examination in reading them has a meaning of no little importance. It involves the principle of examining a student upon his command of a subject, instead of upon the ground covered by a particular course. The principle, wisely applied, can be extended far with manifest advantage. It is a test of power, of the grasp of a subject, as compared with minute attention to particular tasks. It throws the responsibility for acquiring knowledge more consciously upon the student, who sees that a single course is not an end in itself but a means to an end. He learns that formal instruction is merely one means to an education; and thereby he may be led to appreciate the value of reading outside of his courses, a habit that many observers think has tended to decay under the influence of an educational bill of fare displaying all knowledge chopped into small morsels whereof any seventeen are enough for intellectual nutrition. Examinations upon a subject, conducted by persons other than the instructors, are commonly used in some form in connection with foreign universities, and while if carried too far they involve dangers, they also have advantages of which we might avail ourselves more fully in our colleges.

In the last report attention was called to the lack in the undergraduate body of appreciation for sound scholarship and excellence in college work. This is a matter upon which too much stress cannot be laid, because few persons familiar with the con-

ditions here and abroad will deny that respect for scholarship in American colleges is lamentably small. The difficulty lies mainly in a failure to perceive the bearing of proficiency in college studies upon subsequent achievement. In the report of the committee on making tests for rank a more generally recognized measure of intellectual power, printed as an appendix to the last annual report, statistics were presented showing the relation of rank in college to standing in the professional schools. The figures covered twelve years. The investigation has since been extended over a longer period, and comprises the effect of the study of different branches of learning in college, with results that are in some cases surprising. For the Law School the statistics cover the twenty years from 1891 to 1910, thus including the men who entered college as early as 1884, a date when the elective system may be regarded as fully mature. For the Medical School the figures cover only the years from 1895 to 1910; because before that time a *cum laude* in the School was given after a four-year course alone, and although in three years a student could regularly obtain the degree of doctor of medicine, he could not win a *cum laude* no matter how high his rank might be. The statistics include only Bachelors of Arts who had taken as many as twelve courses, or nearly three quarters of their work, in Harvard College.¹

The results show that in both schools the chance of a *cum laude* is much greater for men who have been good scholars in college than for those whose rank has not been high. In the Law School the *cum laude* is given sparingly, only 18% of all the graduates of Harvard College winning it, but the proportion varies very much according to the rank the men attained in college. Of the 609 men who graduated from Harvard College with a plain degree, only 40 or 6.6% won a *cum laude* in the Law School. Of the 305 men graduating from college with a *cum laude*, 68 or 22.3% obtained the *cum laude* in the Law School. Of the 200 with a *magna cum laude*, 80 or 40% did so; and of the 33 with a *summa cum laude*, 20 or 60.6%.

Of late years at least, the number of high scholars entering

¹ The few Bachelors of Science from the Lawrence Scientific School stood in the Medical School distinctly lower on the average than the Bachelors of Arts from Harvard College.

the Medical School is much smaller, and the *cum laude* is given there far more freely than in the Law School, slightly more than half of the Harvard Bachelors of Arts obtaining it; yet the figures are hardly less conclusive. Of the 239 men who graduated from college with a plain degree, 86 or 35.9% won it; of the 85 with a *cum laude* degree, 65 or 76.5%; of the 39 with a *magna cum laude*, 34 or 87.2% attained the *cum laude* in the School; and so did both of those with a *summa cum laude* or 100%.

These figures prove that on the average the higher a man's rank in college the better he is likely to stand in his professional studies; and the same principle may be carried farther back to the work of the preparatory school. The records and ages of these men on entering college were examined, and it appeared that those who failed to attain a *cum laude* in the Medical School had on the average one entrance condition apiece and were eighteen years and eleven months old, while those who were destined to win that distinction in the School had on the average two thirds of a condition and were four months younger. In the Law School the divergence was naturally greater, on account of the higher standard for the *cum laude*. On the average the plain men had nine tenths of a condition and were eighteen years and nine months of age; while the *cum laude* men had only one third of a condition and were ten months younger. Clearly the good scholar is usually a good scholar as a boy, as an undergraduate, and in the professional school; and the loafer in college who distinguishes himself highly in the study of his profession is more common in fancy than in fact.

The effect upon subsequent professional study of the election of different subjects by undergraduates is not less interesting. The courses taken in college by the men graduating from the Law and Medical Schools throughout these periods have been tabulated, and the cases noted where six or more courses were chosen from one of the four groups established by the new regulations for the choice of electives; the first group comprising languages and literature with fine arts and music; the second, natural science; the third, history, political and social science; and the fourth, philosophy and mathematics. The results seem to show that it makes little difference in which of the four groups the six or more courses were taken; the figures being as follows:—

GROUP IN WHICH 6 OR MORE COURSES WERE TAKEN	LAW SCHOOL			MEDICAL SCHOOL		
	<i>Cum laude</i>	Not <i>cum laude</i>	Per cent of <i>cum laude</i>	<i>Cum laude</i>	Not <i>cum laude</i>	Per cent of <i>cum laude</i>
1. Languages and Literature . .	180	801	18.4	166	145	53.4
2. Natural Science	3	19	13.6	81	75	51.9
3. History and Polit. Science .	129	627	17.1	24	30	44.4
4. Philosophy and Mathematics	11	8	57.9	7	6	53.8

In some of these groups the number of men who took six or more courses is too small to warrant any general deduction. This is true, for example, of the men who devoted themselves to natural science, or to philosophy and mathematics, before entering the Law School. But wherever the numbers are sufficiently large to be really significant, the proportion of *cum laude* degrees in the professional schools is remarkably uniform for all of the groups. The most striking exception, that of the fourth group among the law students, is due to the men who took courses in mathematics and is easily explained, for a man who devotes much time to mathematics under a free elective system is likely to have a strong intellectual appetite, and in fact these men usually graduated from college with high rank.

The statistics will be published in more detail hereafter,¹ but their general effect has been sufficiently described here to suggest the conclusion to be drawn from them:—that it makes little difference to what branch of learning a man devotes his chief attention in college, but it is of great importance how well he studies it.

College admission requirements have long been a source of difficulty, and your Committee on the relation of the University to Secondary Schools, in their report last year, expressed their “conviction that it is of the highest importance that the college

¹ They have already been published somewhat more fully in the *Harvard Graduates' Magazine* for December, 1910. The discrepancies in the figures are due to the correction of errors caused chiefly by the fact that some students did not receive their degrees until a subsequent year and hence do not appear in the annual lists. The figures given here are taken from the new Quinquennial Catalogue.

should be more accessible to graduates of public high schools in all parts of the country." When the students were drawn mainly from local public or private schools whose chief occupation was preparing boys for college, the question was simple. The entrance examination then had a double function: that of ascertaining whether a boy had been trained at school well enough to fit him for college work; and that of setting a standard of education for the schools. But when the colleges came to receive students from schools whose main object was not to fit boys for college, or which fitted them for a number of colleges with different requirements, the second function was largely dislodged. Any college that aims to be more than a local institution must draw students in small numbers from many schools in different parts of the country, schools whose curriculum it cannot expect to mould by its requirements. Thus the object of admission requirements becomes the single one of determining whether a boy is fitted for the work of the college. Our difficulty at present is not that our standards are too high, or that we insist upon Latin, but that our requirements are ill adjusted even to the best work in the best schools, unless these make it their chief business to prepare for our examinations. Much has been done of late years, by accepting the papers of the College Entrance Examination Board, and otherwise, to reduce unnecessary obstacles; but the impediments are still great for pupils in schools outside of New England. Most American colleges have adopted the plan of admission by certificate from accredited schools. This, however, has by no means proved perfectly satisfactory; and the schools complain that, either by manifold entrance examinations, or by a curriculum virtually prescribed for the acceptance of a certificate in the case of the few boys who intend to enter college, their freedom of teaching is seriously cramped. The problem of adjustment between secondary and higher education has not yet been solved in this country. Nor are the colleges likely to solve it either by forcing their requirements rigidly upon the schools, or by accepting the product that every kind of secondary school puts forth.

Our entrance examinations, as applied to schools that do not make a business of preparing for them, are a defective test both of school work and of fitness to pursue college studies. They

keep away many excellent boys from distant schools; they induce fruitless cramming to obtain the few last points; and they burden with a load of conditions many boys who ought either to be excluded, or to be admitted with an opportunity to devote their whole time to college work and do it well. For a forcible statement of the evils from which we suffer the reader is referred to the report of the Chairman of the Committee on Admission, which is printed in the general appendix to these reports. Entrance examinations on all the subjects pursued in the secondary school are not a satisfactory measure of the amount of ground covered, and tend to fix the attention of both teachers and pupils upon the examination paper, rather than upon a mastery of the subject; while a certificate is little guarantee of the character of the work done. It may be possible, without lowering our standard, to use each of these methods for the objects to which it is suited, and thus combine the merits of both. It might be possible, after prescribing the main subjects of a satisfactory school curriculum, to accept a certificate that the work of the school had been done, and then examine upon a few of the principal subjects, insisting that upon all of these the boy must make a creditable showing. This would involve accepting a certificate for the quantity of school work, and holding sample examinations to test its quality, the certificate being received, not as an opinion of the schoolmaster upon the qualifications of the candidate, but as a bare statement of fact in regard to the curriculum pursued. Such a plan, which removes some of the chief defects both of the system of examination and of that of admission by certificate, has met with marked approval in various colleges. The whole question of revising our entrance requirements was referred by the Faculty of Arts and Sciences to a committee which has been studying the matter with great care, and has collected a mass of valuable information. As this report, indeed, goes to the printer, the Faculty is considering the report of that committee.

Hitherto our standard for entrance has been severe, but a boy who was not qualified to enter could enjoy most of the pleasures of college life, and gradually work himself into regular standing, by registering as a special student. Of late the Committee on Admission has been reducing the number of such students until this back door to college is now almost closed. The special

student is becoming, what the name implies, a man who, because he has passed school age or for some other reason, is not in a position to enter college but who desires to get the benefit of some part of the instruction. Such a man should be welcome, and encouraged to pursue the courses that he can take with profit, but he should not be treated as an undergraduate or regarded as a candidate for the bachelor's degree.

The key to many of our college problems would seem to lie in the establishment of a series of Freshman dormitories with dining halls. This would make possible a closer supervision and a more direct influence over the entering class without vexatious or grandmotherly regulation. It would teach the Freshmen to use and enjoy the freedom of college without abusing it. It would give far greater opportunity for men from different schools and from different parts of the country, to mix together and find their natural affinities unfettered by the associations of early education, of locality and of wealth; and above all it would tend to make the college more truly national in spirit. There have been obstacles to surmount about the site, but these are nearly overcome, and the question has now become one of raising the money to erect and furnish the buildings. Although a former bequest for dormitories will supply a part of the sum needed, the remainder of the amount required is large, but I believe that no gift will confer greater or more enduring benefit upon the college.

At the other end of college life the same question of bringing the students together has been solved more successfully than for many years. For some time the Seniors have been given a preference for rooms in Hollis, Stoughton, and Holworthy. In the spring of 1910 the Juniors determined to take advantage of this privilege more fully than ever before, and asked also for priority in two entries of Thayer, in which improvements in plumbing and steam heating were made. The result has been that of the 382 resident members of the Class of 1911, at least 195 have rooms in these four buildings at the north end of the Yard. With improvements in other dormitories the traditional popularity of the Yard could probably be in large measure restored, to the distinct advantage of the social conditions of college life.

It may be remembered that the condition of the two dining associations at Memorial and Randall Halls had become so unsatisfactory, and the financial loss so great, that in the spring of 1909 the Corporation undertook to reorganize them. Randall Hall, which furnishes the cheaper board, came nearer to paying its way and must clearly be maintained for the benefit of the poorer students. In spite of the risk of loss the Corporation determined to reopen Memorial Hall also, because it brings together at table many students who would otherwise scatter for their meals and thereby miss much of the companionship of college life. With this object arrangements were successfully made to encourage the formation of club tables there; and in fact both halls were well filled throughout the year. The service was better and the food much better than before. The financial results also were gratifying. Both halls more than paid their running expenses, while Randall paid substantially the whole interest and sinking fund on its debt, and Memorial \$3,653.96, or about one half of the interest on the amount hitherto advanced for permanent improvements and equipment. Beside the benefit to the students, therefore, the University was financially a gainer by not closing Memorial Hall.

In January a change was made in the services at Appleton Chapel. For many years the only Sunday service has been held in the evening, and although the attendance of students was at times large it was irregular, depending upon the attractiveness of the preacher; while the chapel was to a great extent filled by people who had no connection with the University. Many students attended their own churches regularly; but it was felt that others who at home had been in the habit of going to church in the morning had ceased to do so altogether, and that a college service held at the usual morning hour would appeal strongly to college men. After Christmas, therefore, the evening service was replaced by one at eleven o'clock in the morning, the whole floor of the chapel being reserved for students and for instructors and their families. In numbers and in regularity the attendance of both has more than fulfilled the hopes entertained. It was not, indeed, expected to be large at first, because many of the students were already attending at that hour other churches from which

it was not designed to draw them. A more complete account of the change and its results will be found in the report of the Chairman of the Board of Preachers.

At the same time the interior decoration of the chapel and the arrangement of the chancel were improved at a cost to the University of \$6,747.30. This may seem an extravagance, but in view of the Wigglesworth endowment, and the gift for the repair of the organ, it seemed to be justified, and it has certainly increased the dignity and impressiveness of the building.

The well-nigh universal feeling that intercollegiate games of football were too dangerous to life and limb has resulted in an effective revision of the rules. These have not, perhaps, been in operation long enough to produce their ultimate results, and it would seem that the teams in some of the colleges have not yet become accustomed to them, but the changes have certainly not made the game a less interesting spectacle, and among the Harvard players, at least, the injuries have been greatly reduced both in number and gravity.

In this connection attention is called to the report of Dean Briggs as Chairman of the Athletic Committee. He criticises the extravagance and luxury in the management of athletics, the training tables, and the general treatment of the members of the teams. The athletic manager is striving to bring these matters within proper bounds, but luxury is a habit easy to form and hard to break. In spite of the extravagance that surrounds them, and the blazing light of publicity in which they are placed, the athletes are, as a rule, singularly modest, but there is a danger both to them and to the tone of college life in petting them too much.

The year has been an eventful one for the professional schools. The Law School suffered grievous losses in the death of Dean Ames and the resignation of Professor Smith. Professor Williston was appointed Acting Dean for the remainder of the year and directed the School with the assistance of Professor Beale, the other member of the Executive Committee. The School has been fortunate in its new Dean, Ezra Ripley Thayer, whose father contributed so greatly to build up the reputation of the School,

and who has himself given up a large practice at the bar to assume the office. The other vacancy has been filled by the appointment of Professor Roscoe Pound, of the University of Chicago, an authority on the Civil as well as the Common Law. The School is now larger than at any previous time in its history, in spite, or in consequence, of the raising of its standards. For the quantity of students the number of instructors is small, but the size of the classes obviously does not prevent efficiency of instruction; while the small and harmonious character of the Faculty, the mutual confidence and the community of aim have contributed much to its power. Partly in order to relieve the members of the Faculty, partly in order to assist the entering class in the School to find their footing, half a dozen Student Advisers have been appointed from the third-year class. Their duties consist chiefly in helping any new students who seek their aid, in teaching them to use the library, and in presiding in the many new club courts among which the whole student body is distributed for the argument of moot cases.

A fourth year has been added to the course at the Law School; not as a part of the requirement for the degree of Bachelor of Laws, but as a voluntary year after receiving that degree. The studies of the fourth year lead to the further degree of Juris Doctor, and they are not designed for the great number of men who intend to practice at the bar. For that purpose the three years' course is deemed a sufficient preparation. They are provided more particularly for men who propose to devote themselves to the study and teaching of law, and with that object a course in Roman or Civil Law is prescribed. The number of men who remain for the fourth year, or who come from other law schools to take advantage of it, is not expected to be large, but legal scholars will find in it an opportunity to acquire a wider knowledge of jurisprudence.

The relations between the Medical School and the Peter Bent Brigham Hospital have at last been placed upon a basis wholly satisfactory to both institutions. The University has no desire to manage the Hospital, nor have the Trustees of the latter an ambition to manage the School. But it is essential to the efficiency of a Medical School that its clinical instructors should

have positions in hospitals, and hence an eminent surgeon or physician cannot be called from a distance to a chair in the School unless he can be offered at the same time a clinic in a hospital. This is impossible unless the appointments in both institutions are made jointly. On the other hand, the Trustees of the Hospital believe that the welfare of their patients will be promoted by having at their disposal the scientific resources of a great school, and by the ability to call to their service the best man from any part of the country by a joint offer of a chair and a clinic. The two institutions are convinced, therefore, that the interests under their charge coincide, and can be attained only by an unbroken mutual understanding in the matter of appointments. With this object in view the Trustees of the Hospital selected as a professional adviser Dr. Francis B. Harrington, a surgeon thoroughly familiar with the needs of the Medical School as well as of the Hospital, whose wise counsel has been of great benefit to both. In form the clinical officers in the Hospital are nominated to the Trustees by the Corporation of the University. In practice the nominees are selected by conference, and no difference of opinion has arisen in regard to them. The Trustees have appointed as their chief medical officer, Dr. Henry A. Christian, already Professor of the Theory and Practice of Physic and Dean of the Medical School; and as their chief surgeon, Dr. Harvey Cushing of Johns Hopkins University, whom the Corporation have at the same time appointed Professor of Surgery in the School. Dr. Cushing will come to Boston as soon as the Hospital is built and ready for patients, that is, in two or three years.

By their large views and wise foresight the Trustees of the Brigham Hospital have conferred a lasting benefit upon the people of Boston no less than upon our Medical School. If the School is to be of national importance it must be able, like every other department of the University, to call leading men from any part of the nation. This it has been able to do, and has done, for laboratory chairs; but hitherto it has not been in a position to attract men of established reputation elsewhere to its clinical professorships. Now it can do so, and has begun in a way that is full of promise for the future of the School.

On the suggestion of Dr. Rosenau, Professor of Preventive Medicine, the University has established a degree of Doctor of

Public Health, to be attained ordinarily by an additional year of special work after receiving a degree from a medical school. The new degree is designed to meet the increasing demand for men qualified to act as superintendents of public health, and as expert advisers of public bodies in providing water supply or sewerage and in taking the manifold precautions needed in an ever increasing urban population for the prevention and arrest of epidemics and contagion. If the growing complexity of our industrial civilization diffuses knowledge and increases wealth, it tends also to diffuse germs and spread infection, but the enlarging scope of medical knowledge places these evils more and more under human control if the men in charge have the requisite training for their work. Preventive medicine is rapidly becoming a special vocation and must be recognized as such by medical schools.

Early in December the new building of the Dental School was dedicated and opened for use. It is close by the Medical School buildings where much of the general medical instruction is given to the students of dentistry. It is a dental hospital as well as a dental school. Its operating rooms and laboratories are large, beautifully lighted and admirably adapted for their uses. The Dean of the School says of it in his report, "A year's use of the building has shown us how complete were the plans, and we enter upon the work of our second year with practically no desire for changing them." Too much credit cannot be given to the instructing staff for their energy and devotion in building up the School. In order to cover a period of financial difficulty the clinical instructors in dentistry have foregone, and still forego, their salaries; but the prosperity of the School must be to them a just source of pride, for the removal of the School to its new quarters has been accompanied by a highly gratifying increase in the number of students.

The agreement for an affiliation between Andover Theological Seminary and the Divinity School has been followed by an arrangement for a joint theological library, to be known as the Andover-Harvard Library. The maintenance of two libraries for the same object a hundred yards apart, involving duplication

of many books, would have meant a needless waste of effort and money; while the combined libraries will become larger and better than either of them could possibly be alone. The joint library is to be housed in the new buildings of the Seminary in Cambridge, and the attitude of the Trustees toward the project has from the beginning been most generous. The books now owned, or hereafter purchased, by each institution are to remain its property, but they are to be kept and used together, the library being managed by a council composed of two representatives from each of the schools, and the Librarian being appointed by the Trustees of the Seminary and confirmed by the Corporation of the University. The corner-stone of the Seminary was laid in the spring and the buildings are rapidly nearing completion. The relations between the two schools are thoroughly cordial, and their coöperation is proving constantly more valuable both to the Seminary and the University.

In the last report a brief summary was given of the instruction offered by the University to persons not enrolled among its regular students, and allusion was made to a conference of the institutions for higher learning in this neighborhood with a view to coöperation in systematic popular education. The movement took definite form during the year, and for the results the reader is referred to the report of the new Dean for University Extension. A few words about the objects sought and the methods used to attain them may not, however, be out of place here. In a university the number of courses of instruction offered must of necessity be very large, both because highly specialized courses must be given in many lines to advanced students, more particularly to graduate students, and because, since every student is forced to finish his whole curriculum of study within a comparatively short period, the instruction he may require must be offered every year, or at least every other year, if he is to get the benefit of it. Neither of these conditions applies to the popular extension of university work. There are no highly advanced students in specialized fields, for persons who can afford the time to pursue a subject very far go to a university or college. Moreover, earnest people not connected with an institution of learning, who want to follow extension courses, are almost always hard at

work, and can take only one or two courses at a time. If, therefore, they desire to take many courses, they must of necessity continue to study many years and can take advantage of a course although it is repeated only at considerable intervals. Hence the important point in extension courses is not that they should be numerous at any one moment, but that they should be of the best quality and should change a good deal from year to year.

By a systematic combination of all the colleges in and about Boston it seemed possible to provide enough courses of that character without imposing upon any of the colleges a burden that would interfere with their obligations to their resident students. For this purpose there has been formed a permanent Commission on Extension Courses containing representatives of Harvard and Boston Universities, of the Massachusetts Institute of Technology, of Boston, Tufts, Wellesley and Simmons Colleges and of the Museum of Fine Arts. The Commission arranges with instructors in these institutions for courses which are equivalent to, and usually identical with, courses offered to their own students, and which are followed by examinations of the same character and standard. The courses are supported in part by the fees of the students and in part by subscriptions from the Boston Chamber of Commerce and the Lowell Institute. The latter is permitted by the will of the Founder to charge for the courses it maintains only two bushels of wheat for each semester, — an amount estimated at present at five dollars a year, — while for the courses not supported by the Lowell Institute the fee is from ten to twenty dollars, certainly a very moderate charge for instruction of this grade.

The administration in detail of the extension work has been undertaken by Harvard, and for this purpose, as well as for the conduct of the Summer School, a special organization seemed expedient. An Administrative Board for Extension Work was therefore created with a Dean as its chairman, and Professor James Hardy Ropes was appointed Dean. The existence of a Dean and Administrative Board lends dignity and stability to the work, and promotes permanence and the maintenance of a high standard both for the winter courses and for the Summer School.

Except for a few courses offered by the professional schools, all the extension courses are under the control of the Faculty of Arts and Sciences, and this is the more important because for most of these courses credit is given toward a degree. The same conditions that gave rise to a distinct organization for extension work have led also to the establishment of a special degree to be obtained thereby. The object of this is twofold. First, it makes the bachelor's degree at Harvard stand, not only for a certain amount of instruction, but also for actual residence in college. Hitherto one year of residence has been required, but that meant only taking a full year's work and did not imply any participation in college life. Hereafter courses at Harvard will not, as a rule, count for the bachelor's degree unless taken by men regularly enrolled as students in the college. The second object is to place an appropriate degree really within the reach of persons unable to devote to continuous study the time needed to attend a college. In the past the year of so-called residence and the requirement of passing the entrance examinations have been serious obstacles; and if the new regulations for the choice of electives were to be strictly applied the bachelor's degree would be well-nigh unattainable by other than regular students in the college. The degree of Associate in Arts has therefore been instituted by Harvard, Radcliffe, Tufts, and Wellesley, to be conferred after passing courses equal in number to those required for the bachelor's degree, but without any requirement of residence or entrance examinations.

The new degree will be obtained chiefly by school teachers and is of interest mainly to them. It is of consequence for them, because in some of the large cities study that counts towards a college degree is demanded for any promotion, and the attainment of such a degree is a prerequisite for teaching in high schools. Now the degree of Associate in Arts, which suffices for admission to our own Graduate School, has been accepted by the School Board of Boston for both of those purposes, and hence fulfils the objects that the teachers have in view. No doubt the degree will be attained from Harvard by few men, and probably not by many women from Radcliffe, but that is no measure of its importance, and still less of the value of the extension courses to the great numbers of people who take less than seventeen of them.

The very fact that they count for a degree lays on the Faculty a responsibility, and furnishes to the public a guarantee, that their standard shall be maintained.

The accounts of expenditure in universities are proverbially unsatisfactory; and although some of the criticisms levelled at them are unreasonable, appearing to assume that the chief test of efficiency is a low cost of instruction, without sufficient regard to its quality or to its influence — unmeasured by ledger entries — in moulding mind and character; yet it is true that the system of accounting in universities is defective. Instruction in different branches of knowledge varies greatly in cost, and in some of them it is of necessity very expensive, particularly for advanced students; but that is no reason why we should not be informed precisely what it does cost. The University has been expanding so rapidly, both in the number of instructors and students and in the variety of subjects taught, that it has become increasingly difficult to survey its financial problems. The firm of Gunn, Richards and Company has, therefore, been employed to examine the accounts, suggest improvements, and enable the Comptroller to present the balances for the year at an earlier date. Changes have already been made, and will it is hoped be completed in the near future.

The University received a number of generous gifts during the year, among the largest being a gift of \$105,097.01 from the Class of 1885 on the twenty-fifth anniversary of its graduation, with pledges increasing the amount to \$111,839.68; a subscription of \$100,000 for the construction and maintenance of a laboratory for chemical research; and a gift from Mr. Adolphus Busch of \$150,000 towards a building for the Germanic Museum, to which he has since added \$100,000 more, making in the opinion of the Corporation a sum large enough to erect and maintain the Museum. Many other gifts will be found recorded in the reports of the Treasurer and of the Deans, Directors, and Curators.

But if our gifts have been large our wants are still greater. Beside the Freshman Dormitories, we sorely need a large addition to the Library, the condition of which was described in the last report and grows worse with every year. An effort is being made

to bring the catalogue and the classification into better order, but our great collection of books can never be made as useful as the library of a university ought to be without a great deal more space than the present building can supply. We need also a chemical laboratory. The laboratory for research supplies this only in part, for it does not affect our students who are still obliged to receive their instruction, and do their work, in an old building, badly over-crowded, very ill ventilated and quite inadequate for its purposes.

An opinion appears to be prevalent in the country that Harvard is a rich institution which has only to ask for money in order to obtain it in limitless amounts, but unfortunately the work she is doing to-day exceeds her resources, even with the most rigid economy. Owing mainly to a normal increase in the roll of salaries the deficit is increasing. Last year there were some extraordinary expenses that will not recur, but when these are deducted, and allowance is made for the apparent loss of income due to a change in the date of closing of the fiscal year from the end of July to the end of June, the deficit for the University, College, and Library was \$50,100.88. We are trying to be as economical as possible, but in a university where the chief source of expense is the salary of instructors, it is impossible to make reductions rapidly, even if that could be done without impairing the value of its work.

The reports which follow from the Deans, the Directors of Laboratories, and the heads of other establishments, will prove interesting to the Overseers and all other friends of the University.

A. LAWRENCE LOWELL, *President.*

CAMBRIDGE, January 9, 1911.

AGE OF STUDENTS WHO ENTERED THE FRESHMAN CLASS OF HARVARD COLLEGE, 1881-1910 INCLUSIVE

Year	14-15	15-16	16-17	17-18	18-19	19-20	20-21	21-22	22-23	23-24	24-25	25-26	26-27	27-28	28-29	29-30	30-31	31-35	35-46	Average Age	No. adm.*
1881	..	3	10	38	73	55	31	10	8	1	1	..	..	..	..	..	..	..	..	19 yrs.	230
1882	1	3	11	58	89	60	28	12	4	5	1	2	..	..	..	..	..	1	..	19 "	275
1883	..	..	17	65	100	61	23	7	7	2	2	1	..	..	..	..	..	..	..	18 "	286
1884	1	..	12	63	90	72	29	8	4	1	5	1	..	..	..	1	1	1	1	10 1/2 mos.	281
1885	2	..	10	63	89	56	40	6	4	4	1	2	..	..	..	..	2	..	..	18 "	321
1886	..	4	14	64	116	67	29	12	3	3	2	3	4	2	..	..	1	..	..	11 1/2 "	338
1887	..	..	8	71	108	87	26	7	12	2	2	1	4	1	..	..	1	..	1	19 "	352
1888	..	..	2	11	58	68	42	19	8	5	4	3	4	3	3	3	3	1	..	19 1/2 "	388
1889	..	1	14	68	124	96	32	12	5	9	9	1	2	4	3	3	3	1	1	19 1/2 "	408
1890	1	2	14	64	129	102	37	26	6	9	10	2	2	1	2	..	1	..	..	19 "	441
1891	..	2	24	82	141	97	40	17	13	7	7	3	4	1	1	..	1	1	..	19 "	487
1892	..	2	19	88	155	120	56	20	12	4	3	5	2	..	..	..	1	..	..	19 1/2 "	467
1893	..	2	7	100	162	102	47	20	7	7	6	4	2	1	1	..	..	..	..	19 "	465
1894	1	3	13	85	142	128	44	20	9	9	5	2	1	1	1	..	..	1	..	19 "	517
1895	..	3	20	99	185	111	42	19	13	7	7	6	4	1	..	..	..	..	..	19 "	481
1896	1	1	24	99	155	109	35	18	12	7	7	5	3	3	..	..	1	..	..	19 "	571
1897	..	1	27	120	181	121	51	28	17	6	9	2	1	3	1	2	..	1	1	19 "	520
1898	..	3	16	107	185	111	45	15	13	7	3	3	4	..	2	3	1	2	1	19 "	554
1899	..	1	27	111	188	126	32	24	15	13	8	4	2	2	..	3	..	2	1	19 "	605
1900	..	2	25	114	199	134	68	20	10	8	8	5	5	1	1	1	1	2	1	19 "	578
1901	..	3	24	128	229	143	71	21	12	4	5	7	1	3	..	3	..	..	1	19 "	648
1902	..	..	29	117	198	129	69	20	8	2	3	4	2	2	1	1	1	..	1	18 "	591
1903	3	5	22	125	205	137	54	17	13	6	11	2	1	..	..	..	1	..	..	18 "	603
1904	..	..	3	26	111	211	58	33	17	11	3	5	1	2	..	1	..	..	1	19 "	621
1905	..	1	24	131	208	154	86	27	15	7	9	3	2	1	3	1	..	..	..	19 "	672
1906	..	1	15	112	198	127	45	14	7	2	2	1	..	1	..	1	..	..	..	18 "	526
1907	..	2	22	108	187	118	51	25	6	2	1	6	3	1	1	..	2	1	1	19 "	535
1908	..	2	24	115	217	115	64	14	6	3	4	1	..	..	1	..	..	..	..	18 "	568
1909	2	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	18 "	535
1910	..	4	17	114	203	116	53	16	7	1	1	3	..	..	..	..	..	..	..	18 "	535

* On the assumption that all who ever joined each class were admitted as Freshmen.

REPORTS OF DEPARTMENTS

THE FACULTY OF ARTS AND SCIENCES

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — I have the honor of presenting a report on the work of the Faculty of Arts and Sciences for the academic year 1909-10.

Besides the President, the Faculty contained eighty-two Professors, two Associate Professors, one Visiting Professor, fifty-two Assistant Professors, one Lecturer, twenty-one Instructors, the Assistant Dean of Harvard College, the Recorder, the Secretary to the Corporation, and the Secretary for Appointments, — in all, a hundred and sixty-four members.

Instruction in 1909-10

With the following list of courses of instruction that were actually given under the authority of the Faculty, I print a statement of the number and the classification of the students in each course. The figures are those officially returned to the Recorder by the several instructors at the close of the academic year, and take no account of persons who, regularly or irregularly, attended the exercises and did the work of a course without being officially recognized as members of it. The abbreviations are those ordinarily used in such lists: *Se.*, Senior; *Ju.*, Junior; *So.*, Sophomore; *Fr.*, Freshman; *Sp.*, Special Student; *uC.*, Unclassified; *Gr.*, Graduate School of Arts and Sciences; *G.S.*, Graduate School of Applied Science; *G.B.*, Graduate School of Business Administration; *R.*, Radcliffe; *Di.*, Divinity; *And.*, Andover; *C.M.*, Conservatory of Music; *Instr.*, Instructor.

COURSES OF INSTRUCTION GIVEN IN 1909-10

Semitic Languages and History

For Undergraduates and Graduates: —

- 1¹. Professor LYON. — Hebrew. Selections from the prose narratives of the Old Testament. 2 *Se.*, 2 *So.*, 1 *Di.*, 1 *And.* Total 6.
- 2². Dr. DAVEY. — Hebrew (second course). Syntax. Extensive reading in the Old Testament. 2 *So.*, 1 *Sp.*, 3 *Di.* Total 6.
- 4 (formerly 12). Professor LYON. — History of Israel, political and social, till the capture of Jerusalem by the Romans. 1 *Se.*, 4 *Ju.*, 1 *So.*, 2 *Fr.*, 2 *Sp.* Total 10.

A5 (formerly A3). Professor ARNOLD. — Introduction to the Old Testament. History of the text; the formation of the canon; historico-critical study of the origin, form, and contents of the several books.

1 Se., 1 Ju., 1 So., 5 Di. Total 8.

A6 (formerly A4). Professor ARNOLD. — Religion of Israel. History of the religious ideas and institutions of Israel from the earliest times to the Maccabæan age.

2 Di. Total 2.

12 *hf.* (formerly 6 *hf.*). Professor LYON. — History of Babylonia and Assyria.

2 Se., 3 Di. Total 5.

Primarily for Graduates:—

A3. Professor ARNOLD. — Hebrew (advanced course). The Prophetic Books of the Old Testament; interpretation and criticism of portions of the Prophetic writings, selected with special reference to literary and historical questions.

1 So., 1 uC., 1 Di. Total 3.

‡10 (formerly 4). Professor LYON. — Assyrian.

1 Di. Total 1.

‡11 (formerly 5). Professor LYON. — Assyrian (second course). The Laws of Hammurabi; Early historical records; Mythological poems.

1 Di. Total 1.

‡13 (formerly 7). Dr. DAVEY. — Arabic. Brünnow's Chrestomathy.

1 uC., 1 Di. Total 2.

‡A14 (formerly 8). Professor ARNOLD. — Arabic (second course). Selections from the Qorân, the Ḥadīth, and classical writers on geography and history.

1 So., 1 Di. Total 2.

17. Dr. DAVEY. — Aramaic. Daniel 2-7; selections from the Targums; Dalman's Aramäische Dialektproben.

1 Fr. Total 1.

18. Dr. DAVEY. — Syriac. Selections from the Peshitto; Syriac prose of the classical period.

1 Gr., 2 So. Total 3.

COURSES OF RESEARCH

‡20a. Professor LYON. — Assyrian: Unpublished inscriptions.

1 Di. Total 1.

A20. Professor ARNOLD. — Old Testament problems.

1 Di. Total 1.

Indic Philology

For Undergraduates and Graduates:—

1a ¹*hf.* Professor LANMAN. — Elementary Sanskrit.

1 Se. Total 1.

1b ²*hf.* Professor LANMAN. — Elementary Sanskrit (continued). Hertel's Pancha-tantra.

1 Se. Total 1.

Primarily for Graduates:—

9. Asst. Professor WOODS. — Philosophical Sanskrit. Yoga system. Patañjali's Sūtras, with the Bhāshya and the Vārttika and the Commentary of Vāchaspati-Mishra.

1 Gr. Total 1.

‡4 ¹*hf.* Professor LANMAN. — Pāli. Selections from the Sacred Books of Buddhism: Jātakas, Buddhaghosa's Commentary on the Dhamma-Pada, the Buddhist Acta Sanctorum.

1 Gr. Total 1.

COURSE OF SPECIAL STUDY

‡20c². Professor LANMAN. — Weekly meetings for the reading of Sanskrit or Pāli texts. 1 Gr., 1 Instr. Total 2.

The Classics

Primarily for Undergraduates:—

GREEK

G. Dr. C. N. JACKSON. — Course for Beginners.

1 Gr., 1 Se., 1 So., 12 Fr., 1 Sp., 1 uC. Total 17.

A. Dr. K. K. SMITH. — Greek Literature. Homer, Odyssey; Euripides and Aristophanes. 1 Ju., 4 So., 11 Fr. Total 16.

B. Professor GULICK, Dr. C. N. JACKSON, and Dr. LOCKWOOD. — Greek Literature. Plato; Lysias; Elegiac, Iambic, and Lyric Poets; Euripides.

2 Ju., 4 So., 33 Fr., 1 Sp., 1 uC. Total 41.

E hf. Dr. WEBB. — Greek Prose Composition (first course).

3 So., 4 Fr. Total 7.

1a ¹hf. Mr. FOBES. — Greek Literature. The Period of Athenian Supremacy. Herodotus; Aeschylus; Plutarch. 1 Ju., 3 So., 4 Fr. Total 8.

1b ²hf. Dr. C. N. JACKSON. — Greek Literature. The Period of Athenian Supremacy. Thucydides; Aristophanes; Sophocles.

1 Ju., 4 So., 2 Fr., 1 uC. Total 8.

2. Professor CLIFFORD H. MOORE and Mr. GALBRAITH. — Greek Literature. Aristophanes; Thucydides; Aeschylus; Sophocles.

1 Ju., 12 So., 1 Fr. Total 14.

3 hf. Dr. C. N. JACKSON. — Greek Prose Composition (second course).

5 Gr., 1 Se., 1 Ju., 3 So. Total 10.

LATIN

A. Mr. GALBRAITH. — Cicero (selected speeches). Virgil.

2 So., 8 Fr., 8 Sp., 1 uC. Total 19.

B. Associate Professor C. P. PARKER, Professor E. K. RAND, Drs. WEBB, LOCKWOOD, and SMITH, and Messrs. GALBRAITH and FOBES. — Latin Literature. Livy; Horace; Terence.

1 Se., 6 So., 119 Fr., 2 Sp., 2 uC. Total 130.

E hf. Dr. K. K. SMITH. — Latin Composition (first course). Translation of English Narrative. 1 Se., 2 So., 4 Fr. Total 7.

1. Professor E. K. RAND and Dr. LOCKWOOD. — Latin Literature. Tacitus; Horace; Catullus; and other poets.

1 Se., 6 Ju., 20 So., 3 Fr., 1 uC. Total 31.

2a ¹hf. Mr. FOBES. — Latin Literature. General View of Latin Poetry.

1 Gr., 1 Ju., 3 So. Total 5.

2b ²hf. Dr. WEBB. — Introduction to Latin Prose Literature. Tacitus.

1 Se., 4 Ju., 1 So. Total 6.

3 hf. Mr. FOBES. — Latin Composition (second course).

6 Gr., 1 Se., 4 Ju., 3 So., 1 Fr. Total 15.

For Undergraduates and Graduates:—

GREEK

6. Professor WEIR SMYTH and Asst. Professor CHASE. — Greek Literature. Demosthenes; Aeschines; Aeschylus; Sophocles; Aristophanes.
4 Se., 11 Ju., 1 So., 2 Fr., 3 uC. Total 21.
- 7 *hf*. Professor GULICK. — Greek Prose Composition (third course).
3 Gr., 3 Se., 1 Ju. Total 7.
9. Professor ROPES. — Introduction to the Study of the New Testament. Origin and History of the New Testament Writings; The Teachings of Jesus Christ and of the New Testament Authors.
1 Gr., 1 Ju., 2 Di., 3 And. Total 7.
8. Professor GOODWIN and Associate Professor C. P. PARKER. — Plato; Aristotle. Survey of Greek Philosophy from Thales to Aristotle.
4 Gr., 4 Se., 2 Ju. Total 10.
15. Professor WEIR SMYTH and Mr. FOBES. — Greek Literature. The Homeric Poems, with studies of their literary influence.
3 Gr., 1 Ju., 1 Fr. Total 5.
- 11 ²*hf*. Professor GULICK. — History of Greek Tragedy. Aeschylus, Sophocles, and Euripides. 5 Gr., 15 Se., 23 Ju., 6 So., 3 Fr., 2 Sp., 1 uC. Total 55.

LATIN

6. Professor HOWARD. — Latin Literature. Suetonius; Pliny; Juvenal; Martial.
2 Gr., 2 Se., 12 Ju., 1 uC. Total 17.
- 7 *hf*. Associate Professor C. P. PARKER. — Latin Composition (third course).
4 Gr., 2 Se., 2 Ju. Total 8.
8. Professors CLIFFORD H. MOORE and E. K. RAND. — Latin Literature. Cicero; Lucretius; Plautus.
9 Gr., 6 Se., 1 Ju. Total 16.
- 10 ¹*hf*. Professor MORGAN. — The Private Life of the Romans. Study of ancient representations.
1 Gr., 26 Se., 37 Ju., 12 So., 4 Fr., 3 Sp., 1 uC. Total 84.
12. Professor HOWARD. — History of Latin Literature to the middle of the Second Century.
1 Gr., 3 Se., 2 Ju. Total 6.
- Comp. Lit. 5 ¹*hf*. Professor E. K. RAND. — The History of Classical Culture in the Middle Ages. (See Comparative Literature.)
5 Gr., 3 Se., 1 So. Total 9.
- Greek and Latin 5 ²*hf*. Associate Professor C. P. PARKER. — Methods and Equipment of a teacher of Classics in secondary schools. 2 Gr. Total 2.

Primarily for Graduates:—

CLASSICAL PHILOLOGY

- 25 ²*hf*. Professor E. K. RAND. — Introduction to the Interpretation and Criticism of Classical Authors. History of Classical Studies.
6 Gr., 1 Instr. Total 7.
- †23. Professor WEIR SMYTH. — The Tragedies of Aeschylus.
9 Gr., 3 R. Total 12.
- †31 ¹*hf*. Professor GULICK. — Herodotus.
3 Gr., 3 R. Total 6.

24 ¹ hf.	Associate Professor C. P. PARKER. — The Philosophy of Plato.	3 Gr.	Total .
†40 ¹ hf.	Professor MORGAN. — Greek Literary Criticism. Aristotle (Art of Poetry). Dionysius (Opuscula). Longinus (On the Sublime).	6 Gr., 1 R.	Total 7.
†60.	Professor ROPES. — The Gospels of Matthew, Mark, and Luke.	1 Di.	Total 1.
†54 ¹ hf.	Professor ROPES. — The Acts of the Apostles.	1 Gr., 1 R.	Total 2.
52 ² hf.	Professor CLIFFORD H. MOORE. — The Comedies of Plautus.	8 Gr.	Total 8.
37 ¹ hf.	Professor MORGAN. — Roman Satire from Ennius to Juvenal.	4 Gr.	Total 4.
39 ¹ hf.	Professor HOWARD. — The Reigns of Claudius and Nero. Suetonius and Tacitus.	7 Gr.	Total 7.
†35 ² hf.	Professor E. K. RAND. — Boethius in his relation to Ancient and to Mediaeval Literature and Philosophy.	6 Gr., 1 R.	Total 7.
†34 ¹ hf.	Professor GULICK. — Greek Grammar (Sounds and Inflections). Study of Dialectic Inscriptions.	7 Gr.	Total 7.
†30 ² hf.	Professor GULICK. — Introduction to Greek Palaeography.	3 Gr., 1 R.	Total 4.
50 ¹ hf.	Professor CLIFFORD H. MOORE. — Introduction to Latin Epigraphy.	7 Gr.	Total 7.
51 ² hf.	Professor HOWARD. — Roman Political Antiquities.	9 Gr.	Total 9.

CLASSICAL ARCHAEOLOGY

For Undergraduates and Graduates : —

1a ¹ hf.	Asst. Professor CHASE. — Greek Archaeology.	5 Gr., 9 Se., 7 Ju., 2 So., 2 Fr.	Total 25.
1b ² hf.	Asst. Professor CHASE. — Etruscan and Roman Archaeology.	3 Gr., 5 Se., 2 Ju., 5 So., 2 Fr.	Total 17.

Primarily for Graduates : —

†4 ² hf.	Asst. Professor CHASE. — The Elder Pliny's Account of the History of Ancient Art.	2 R.	Total 2.
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20. THE SEMINARY OF CLASSICAL PHILOLOGY.

Professors WEIR SMYTH and CLIFFORD H. MOORE, Directors for 1909-10. — Training in philological criticism and research. Text-criticism and interpretation of Greek and Latin authors : for 1909-10, Aeschylus and Plautus.

5 Gr. Total 5.

English

ENGLISH COMPOSITION

Primarily for Undergraduates : —

A. Professors BRIGGS and HURLBUT, Asst. Professor GARDINER, Drs. WEBSTER, BERNBAUM, and LONG, and Messrs. FRENCH, HERSEY, M. MCLEOD, R. L. LEWIS, IVES, and LOOMIS. — Rhetoric and English Composition.

1 Gr., 9 So., 459 Fr., 27 Sp., 7 uC., 1 C.M. Total 504.

Of this number, 100 (2 So., 89 Fr., 7 Sp., 2 uC.) were relieved of the prescription of English at the end of the first half-year; 53 (1 So., 50 Fr., 2 Sp.) took the second half-year's work as an elective half-course.

- 28a *hf.* Mr. T. HALL. — English Composition. Practice in writing in connection with English 28. 1 Gr., 17 Fr., 4 uC. Total 22.
- D^{1 or 2} *hf.* Mr. T. HALL, assisted by Messrs. CURTIS and W. O. HUBBARD. — English Composition. 3 Se., 10 Ju., 60 So., 51 Fr., 2 Sp., 10 uC. Total 136.
31. Mr. HAGEDORN. — English Composition. 1 Ju., 12 So., 7 Fr., 2 Sp., 4 uC. Total 26.
22. Dr. MAYNADIER, assisted by Mr. COUES. — English Composition. 1 Gr., 16 Se., 30 Ju., 15 So., 10 Fr., 2 Sp., 11 uC., 1 Di. Total 86.
18. Mr. KELSO. — The Forms of Public Address. 7 Se., 20 Ju., 9 So., 2 Fr., 1 Sp., 4 uC. Total 43.
- 30 ¹*hf.* Mr. KELSO. — Debating. 5 Se., 2 Ju., 1 uC. Total 8.

For Undergraduates and Graduates: —

12. Mr. COPELAND. — English Composition. 4 Gr., 10 Se., 9 Ju., 5 So., 4 Fr., 3 Sp., 1 Law. Total 36.
- 58 *hf.* Professor WENDELL. — English Composition. 8 Gr., 1 G.S., 12 Se., 1 Ju. Total 22.

Primarily for Graduates: —

5. Professor BRIGGS. — English Composition (advanced course). 8 Gr., 8 Se., 7 Ju., 1 So., 1 Fr., 2 Sp., 1 uC., 1 Di. Total 29.
47. Professor BAKER. — English Composition. The Technique of the Drama. 4 Gr., 1 Se., 3 Ju., 1 Fr., 4 Sp., 1 uC. Total 14.

ENGLISH LANGUAGE AND LITERATURE

Primarily for Undergraduates: —

- 28 *hf.* Professors BRIGGS, KITTREDGE, BAKER, and NEILSON, Dr. BERNBAUM, and Mr. T. HALL. — History and Development of English Literature in outline. 1 Gr., 69 Fr., 2 Sp., 9 uC., 2 C.M. Total 83.
41. Professor WENDELL, Mr. W. R. CASTLE, and Mr. STEARNS. — History of English Literature from the Elizabethan times to the present. 1 Gr., 11 Se., 26 Ju., 44 So., 5 Fr., 3 Sp., 13 uC. Total 103.
- 37 ²*hf.* Dr. MAYNADIER. — The Story of King Arthur. 1 Gr., 7 Se., 21 Ju., 29 So., 20 Fr., 1 Sp., 4 uC. Total 83.

For Undergraduates and Graduates: —

- 3a ¹*hf.* Dr. WEBSTER. — Anglo-Saxon. 17 Gr., 2 Se., 1 Ju. Total 20.
1. Professors NEILSON and F. N. ROBINSON. — Chaucer. 18 Gr., 9 Se., 5 Ju., 2 So., 1 uC. Total 35.
2. Professor KITTREDGE. — Shakspeare. 17 Gr., 20 Se., 41 Ju., 23 So., 7 Fr., 7 Sp., 13 uC., 1 Di. Total 129.
- 11a ¹*hf.* Professor NEILSON. — Bacon. 2 Gr., 3 Se., 12 Ju., 8 So., 2 Fr., 1 Law. Total 28.
- 11b ²*hf.* Professor NEILSON. — Milton. 5 Gr., 6 Se., 10 Ju., 9 So., 3 Fr., 1 Sp., 1 uC. Total 35.

52^{2hf}. MR. COPELAND.—Johnson and his Circle.

4 Gr., 33 Se., 54 Ju., 33 So., 12 Fr., 5 Sp., 6 uC. Total 147.

16^{2hf}. PROFESSOR BRIGGS.—History and Principles of English Versification.

13 Gr., 6 Se., 13 Ju., 5 So., 2 Fr. Total 39.

Primarily for Graduates:—

3b^{2hf}. PROFESSORS KITTREDGE and F. N. ROBINSON.—Anglo-Saxon. *Béowulf*.

20 Gr., 1 Se. Total 21.

25^{2hf}. PROFESSOR F. N. ROBINSON.—Anglo-Saxon Poetry. Interpretation of

Texts and Investigation of Special Topics. 8 Gr. Total 8.

Comp. Lit. 25^{1hf}. PROFESSOR KITTREDGE.—The English and Scottish Popular

Ballads. (See Comparative Literature.) 12 Gr. Total 12.

44^{2hf}. PROFESSOR KITTREDGE.—Chaucer. Study of Special Topics.

10 Gr. Total 10.

14. PROFESSOR BAKER.—The Drama in England from the Miracle Plays to the

Closing of the Theatres. 15 Gr., 7 Se., 6 Ju., 2 Sp. Total 30.

39. PROFESSOR BAKER.—The Drama in England from 1642 to 1900.

20 Gr., 7 Se., 7 Ju., 4 So., 2 Fr., 1 Sp., 1 uC. Total 42.

56^{1hf}. DR. BERNBAUM.—Eighteenth Century Sentimentalists and their Opponents.

16 Gr., 3 Se., 2 Ju., 1 So. Total 22.

24^{1hf}. PROFESSOR NEILSON.—Studies in the Poets of the Romantic Period.

19 Gr., 8 Se., 2 Ju., 3 So. Total 32.

29^{1hf}. DR. MAYNADIER.—The English Novel.

6 Gr., 7 Se., 2 Ju., 1 So., 1 Fr., 2 Sp., 2 uC. Total 21.

33^{2hf}. PROFESSOR WENDELL.—The Literary History of America.

6 Gr. Total 6.

COURSES OF SPECIAL STUDY

20. The instructors in English held themselves ready to assist and advise competent Graduate Students who might propose plans of special study in the language or literature of the periods or in the topics mentioned below. Such plans, however, must in each case have met the approval of the Department.

a. PROFESSOR F. N. ROBINSON.—Anglo-Saxon. 2 Gr. Total 2.

b. PROFESSOR KITTREDGE.—Middle English. 2 Gr. Total 2.

c. PROFESSOR NEILSON.—Modern English Literature. 7 Gr. Total 7.

d. PROFESSOR BAKER.—The English Drama: its history, and its relation to Continental Drama. 2 Gr. Total 2.

Public Speaking

Primarily for Undergraduates:—

1¹. MR. NELSON.—Voice Cultivation.

6 Gr., 1 G.S., 4 Se., 12 Ju., 9 So., 14 Fr., 4 Sp., 4 uC., 1 Law. Total 55.

2^{hf}. ASST. PROFESSOR WINTER and MR. JOHNSON.—Masterpieces of Discourse.

1 G.S., 9 Se., 9 Ju., 6 So., 2 Sp., 2 uC. Total 29.

3hf. Asst. Professor WINTER and Mr. P. B. KENNEDY — Platform Speaking.
10 Se., 16 Ju., 12 So., 2 Fr., 2 uC. Total 42.

4hf. Asst. Professor WINTER and Mr. PERRET. — Dramatic Interpretation.
1 Gr., 1 G.B., 1 Se., 1 Ju., 2 So., 1 Sp., 1 Di. Total 8.

5. Asst. Professor WINTER, and Messrs. WILLARD, P. B. KENNEDY, NELSON,
PERRET, and JOHNSON. — Advanced Training in Platform Speaking.
3 Se., 3 Ju. Total 6.

SPECIAL ADVANCED COURSE

Qualified students planning to become teachers of public speaking or preparing for professional platform work were given an opportunity for special individual training on application to Professor WINTER.

1 Gr., 1 Se., 1 Sp. Total 3.

Germanic Languages and Literatures

GERMAN

Primarily for Undergraduates:—

A. Asst. Professor BIERWIRTH, Drs. WEBER, BOESCHE, STEWART, and LIEDER, and Messrs. IBERSHOFF, HILDRETH, and PETTENGILL. — Elementary Course.

8 Gr., 5 Se., 14 Ju., 11 So., 161 Fr., 9 Sp., 13 uC., 1 Sc. Total 222.

B. Mr. W. G. HOWARD. — Elementary Course (counting as two courses).

1 Gr., 1 Ju., 1 So., 17 Fr., 4 uC. Total 24.

C. Drs. BOESCHE and STEWART — German Prose and Poetry.

1 Ju., 6 So., 28 Fr., 1 Sp., 4 uC. Total 40

1a. Drs. WEBER and STEWART. — German Prose and Poetry.

1 Gr., 1 Se., 9 Ju., 26 So., 17 Fr., 3 Sp., 4 uC. Total 61.

1b. Drs. WEBER and LIEDER. — German Prose. Subjects in History and Biography.

2 Ju., 18 So., 14 Fr., 3 Sp., 2 uC. Total 39.

1c. Dr. LIEDER. — German Prose, narrative and descriptive. Subjects in Natural Science.

1 Gr., 2 Se., 2 Ju., 7 So., 10 Fr., 1 uC. Total 23.

Fhf. Dr. STEWART. — Practice in speaking and writing German (first course)

2 Se., 6 Ju., 5 So., 12 Fr., 1 Sp., 2 uC. Total 28.

Hhf. Dr. WEBER. — Practice in speaking and writing German (second course).

1 Gr., 3 Se., 1 Ju., 2 So., 1 Fr. Total 8.

2a. Professor VON JAGEMANN and Dr. BOESCHE. — Introduction to German Literature of the Eighteenth and Nineteenth Centuries. Lessing, Goethe, and Schiller. German Ballads and Lyrics.

1 Se., 10 Ju., 17 So., 42 Fr., 1 Sp., 3 uC. Total 74.

2b. Professor H. S. WHITE and Dr. LIEDER. — Introduction to German Literature of the Eighteenth and Nineteenth Centuries. Lessing, Goethe, and Schiller. German Ballads and Lyrics.

4 Se., 16 Ju., 24 So., 41 Fr., 1 Sp., 6 uC. Total 92.

3. Asst. Professor BIERWIRTH. — Schiller and his Time. *Der Dreissigjährige Krieg*; *Wallenstein*; *Maria Stuart*; *Die Jungfrau von Orleans*; *Die Braut von Messina*; *Gedichte*.

4 Ju., 4 So., 5 Fr., 2 uC. Total 15.

4. Asst. Professor WALZ. — Goethe and his Time. Works of the Storm and Stress Period; Autobiographical Works; Poems; Egmont; Iphigenie; Tasso; Faust. 6 Se., 15 Ju., 14 So., 6 Fr., 1 Sp., 3 uC. Total 45.
- 25 ¹hf. Professor FRANCKE, assisted by Mr. E. H. P. GROSSMANN. — History of German Literature in outline. 18 Se., 13 Ju., 21 So., 6 Fr., 1 Sp., 1 uC., 1 C.M. Total 61.

For Undergraduates and Graduates: —

- G hf. Dr. BOESCHE. — German Grammar and practice in writing German (advanced course). 5 Gr., 1 Se., 1 Ju., 1 So. Total 8.
- L hf. Mr. GROSSMANN. — German Correspondence. 1 Se., 1 Fr. Total 2.
- 6 ¹hf. Professor FRANCKE. — Deutsche Kulturgeschichte vom Ende des dreissig-jährigen Krieges bis zum Tode Friedrichs des Grossen. 13 Gr., 3 Se., 4 Ju., 1 So., 1 Fr., 1 uC. Total 23.
- Comp. Lit. 8 ²hf. Professor FRÄNCKE. — Goethe's Faust; with a study of kindred dramas in European Literature. (See Comparative Literature.) 5 Gr., 5 Se., 3 Ju., 12 So., 1 Fr., 3 uC. Total 29.
- Comp. Lit. 10 ²hf. Asst. Professor WALZ. — The Influence of English Literature upon German Literature in the Eighteenth Century. (See Comparative Literature.) 5 Gr., 1 Se., 6 Ju., 2 So., 1 Fr., 1 Sp. Total 16.
- 26a ¹hf. Mr. W. G. HOWARD. — German Literature in the first half of the Nineteenth Century. Kleist; Uhland; Heine. 3 Gr., 4 Se., 1 Ju., 3 So., 1 Fr., 1 uC. Total 13.
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- ‡Comp. Lit. 28 ¹hf. Mr. W. G. HOWARD. — German Literature in the Sixteenth Century and its relation to English Literature. Brant, Hutten, Luther, Hans Sachs, Fischart. Popular Literature in prose and verse. The Drama. (See Comparative Literature.) 3 Gr., 1 Ju., 1 uC., 2 R. Total 7.
- 17 ¹hf. Professor H. S. WHITE. — Walther von der Vogelweide. 4 Gr., 1 So. Total 5.
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16. Mr. ALLARD. — The French Drama in the Nineteenth Century.
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- Comp. Lit. 9. Asst. Professor BABBITT. — Rousseau and his Influence. (See Comparative Literature.) 8 Gr., 7 Se., 6 Ju., 6 So., 1 uC. Total 28.
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- History 23a¹hf. Professor CHANNING. — Selected Topics in the historical development of American Institutions. The Economic History of the American Revolution, 1760–1783. 8 Gr., 2 Se. Total 10.
- History 23b²hf. Professor CHANNING. — Selected Topics in the historical development of American Institutions. The Constitutional History of the Critical Period, 1783–1787. 6 Gr., 2 Se. Total 8.

Course of Research

- History 20e. Professor CHANNING. — American History. 4 Se. Total 4.

V. ECONOMIC HISTORY

For Undergraduates and Graduates: —

- Economics 6a¹hf. Professor GAY, assisted by Dr. GRAY. — European Industry and Commerce in the Nineteenth Century. (See Economics.) 12 Gr., 15 Se., 42 Ju., 13 So., 7 Fr., 5 Sp., 2 uC. Total 96.
- Economics 6b²hf. Professor GAY, assisted by Dr. GRAY. — Economic and Financial History of the United States. (See Economics.) 12 Gr., 24 Se., 70 Ju., 35 So., 14 Fr., 5 Sp., 10 uC. Total 170.
- Economics 11. Professor GAY. — Modern Economic History of Europe. 4 Gr., 1 G.B., 4 Ju., 2 So., 1 uC. Total 12.

Primarily for Graduates: —

- Economics 10²hf. Dr. GRAY. — Mediaeval Economic History of Europe. (See Economics.) 3 Gr. Total 3.

Course of Research

Economics 20a. Professor GAY. — Economic History of England. (See Economics.) 2 Gr. Total 2.

VI. CHURCH HISTORY

History 5, 6, 7, 24a, 24b, 26, and 20a are courses in Church History. In addition to these, the following courses in Andover Theological Seminary (offered Primarily for Graduates) were open to students in Harvard University:—

History A2. Professor PLATNER. — History of Christian Doctrine. 2 Ju., 3 Di. Total 5.

History A4^{2hf}. Professor PLATNER. — History of the Church in England. 1 Gr. Total 1.

History A6. Professor PLATNER. — History of Early Christian Literature. 1 Gr. Total 1.

VII. HISTORY OF RELIGIONS

Primarily for Graduates:—

History of Religions 3^{2hf}. Professors KITTREDGE and F. N. ROBINSON. — Germanic and Celtic Religions. 1 Ju. Total 1.

VIII. MODERN GOVERNMENT

For Undergraduates and Graduates:—

Government 10^{2hf}. Mr. WALLAS. — British Central Government. 3 Gr., 26 Se., 19 Ju., 12 So., 3 Fr., 2 Sp., 2 uC. Total 67.

Government 21. Mr. E. M. PARKER. — Comparative Administration and Administrative Law. 1 Gr., 3 Se., 4 Ju. Total 8.

Government 28^{1hf}. Mr. PORRITT. — Party History and the Organization of Political Parties in England from the reign of George III to the general election of 1906. 9 Gr., 2 Se., 1 So., 1 Sp. Total 13.

Government 29^{1hf}. Mr. PORRITT. — The Development of Responsible Government in British Colonies. 8 Se., 2 Ju., 1 So., 1 Sp. Total 12.

Government 17a^{1hf}. Asst. Professor MUNRO, assisted by Mr. HULL. — The Government of European Cities. 4 Gr., 1 G.S., 12 Se., 38 Ju., 23 So., 5 Fr., 4 Sp., 5 uC. Total 92.

•Government 17b^{2hf}. Dr. E. H. GOODWIN. — The Government of American Cities. 4 Gr., 12 Se., 44 Ju., 22 So., 8 Fr., 3 Sp., 6 uC. Total 99.

Government 24^{2hf}. Dr. E. H. GOODWIN. — Municipal Reform in the United States. 3 Gr., 5 Se., 15 Ju., 14 So., 4 Fr., 1 Sp. Total 42.

Government 30^{1hf}. Mr. MATTHEWS, assisted by Mr. POLLAK. — Municipal Government in the United States, with Special Reference to Massachusetts Cities. 2 Gr., 53 Se., 44 Ju., 13 So., 6 Fr., 2 Sp. Total 120.

Economics 24^{2hf}. Dr. HOLCOMBE. — Problems of Municipal Ownership and Control in Europe and Australia. (See Economics.) 4 Se., 21 Ju., 5 So., 1 Fr., 3 Sp. Total 34.

Primarily for Graduates:—

Government 18^{hf}. Mr. WALLAS. — English Local Government.

3 Gr., 5 Se., 3 Ju., 3 So., 2 Fr., 1 Sp. Total 17.

Government 31^{2hf}. Mr. WALLAS. — The Psychological Conditions of Modern Government.

5 Gr., 3 Se., 5 Ju., 1 Med. Total 14.

Courses of Research

Government 20e. Professor A. B. HART and Asst. Professor MUNRO. — American Institutions.

10 Gr., 1 Sp., 1 Law. Total 12.

Government 20f. Professor STIMSON. — Constitutional Protection of Private Rights.

1 Gr. Total 1.

IX. LAW AND POLITICAL THEORY

For Undergraduates and Graduates:—

Government 6b^{2hf}. Asst. Professor MUNRO. — History of Political Theories since the Protestant Reformation.

2 Gr., 3 Se., 3 Ju., 1 So., 3 uC. Total 12.

Government 16. Professor STIMSON, assisted by Mr. NELSON. — Tendencies of American Legislation, with an historical view of prototypes in English legislation.

3 Gr., 8 Se., 9 Ju., 6 So., 1 Sp. Total 27.

Government 25^{1hf}. Mr. JOSEPH WARREN. — Elements of Jurisprudence.

11 Se., 17 Ju., 10 So., 2 Fr., 2 uC., 1 Law. Total 43.

Primarily for Graduates:—

Government 19. Professor STIMSON. — American Constitutional Law: A study of constitutional principles and limitations throughout the United States.

2 Gr., 2 Se., 4 Ju., 1 So. Total 9.

X. INTERNATIONAL LAW AND DIPLOMACY

For Undergraduates and Graduates:—

Government 4. Professor MACVANE. — Elements of International Law.

4 Gr., 1 G.S., 16 Se., 21 Ju., 6 So., 4 Sp., 5 uC. Total 57.

Government 13^{hf}. Asst. Professor JOHNSTON. — European Diplomacy since 1814.

5 Gr., 2 Se., 1 Ju. Total 8.

Primarily for Graduates:—

Government 14. Professor A. B. HART. — American Diplomacy. Treaties: Application of International Law; Foreign Policy.

9 Gr., 2 Se., 5 Ju. Total 16.

Government 15. Professor WILSON (Brown University). — International Law as administered by the Courts and as observed in international negotiations.

5 Gr., 3 Se., 1 So., 1 Law. Total 10.

Economics

Primarily for Undergraduates:—

1. Professors CARVER and BULLOCK, assisted by Drs. HUSE and HOLCOMBE, Messrs. M. T. COPELAND, SHARFMAN, and USHER. — Principles of Economics. 15 Se., 83 Ju., 193 So., 80 Fr., 15 Sp., 37 uC. Total 423.

7^{2hf}. Dr. HUSE. — Public Finance considered with special reference to the Theory and Methods of Taxation.

1 Gr., 28 Se., 37 Ju., 33 So., 9 Fr., 6 Sp., 10 uC. Total 124.

I. ECONOMIC THEORY AND METHOD

For Undergraduates and Graduates:—

4. Professor RIPLEY. — Statistics. Theory, method, and practice.

8 Gr., 2 Se., 6 Ju., 4 So., 3 Sp., 1 uC., 2 Di. Total 26.

14a^{1hf}. Professor CARVER. — The Distribution of Wealth.

15 Gr., 16 Se., 23 Ju., 7 So., 3 Sp., 3 uC. Total 67.

14b^{2hf}. Professor CARVER. — Methods of Social Reform. Socialism, Communism, the Single Tax, etc.

14 Gr., 16 Se., 18 Ju., 5 So., 3 Sp., 3 uC. Total 59.

Primarily for Graduates:—

‡15¹. Professor BULLOCK. — History and Literature of Economics to the year 1848.

6 Gr. Total 6.

II. ECONOMIC HISTORY

For Undergraduates and Graduates:—

6a^{1hf}. Professor GAY, assisted by Dr. GRAY. — European Industry and Commerce in the Nineteenth Century.

12 Gr., 15 Se., 42 Ju., 13 So., 5 Fr., 7 Sp., 2 uC. Total 96.

6b^{2hf}. Professor GAY, assisted by Dr. GRAY and Mr. ELIOT JONES. — Economic and Financial History of the United States.

12 Gr., 24 Se., 70 Ju., 35 So., 14 Fr., 5 Sp., 10 uC. Total 170.

11. Professor GAY. — Modern Economic History of Europe.

4 Gr., 1 G.B., 4 Ju., 2 So., 1 uC. Total 12.

Primarily for Graduates:—

10^{2hf}. Dr. GRAY. — Mediaeval Economic History of Europe. 3 Gr. Total 3.

III. APPLIED ECONOMICS

For Undergraduates and Graduates:—

5^{1hf}. Professor RIPLEY, assisted by Mr. ELIOT JONES. — Economics of Transportation.

6 Gr., 48 Se., 57 Ju., 17 So., 6 Fr., 4 Sp., 3 uC., 1 Di. Total 142.

8a^{1hf}. Professor DEWEY (Massachusetts Institute of Technology), assisted by Mr. GRUA. — Money. A general survey of currency legislation, experience, and theory in recent times.

4 Gr., 15 Se., 29 Ju., 4 So., 1 Fr., 2 Sp., 1 uC. Total 56.

8b^{2hf}. Asst. Professor SPRAGUE, assisted by Mr. GRUA. — Banking and Foreign Exchange.

3 Gr., 20 Se., 49 Ju., 17 So., 2 Fr., 2 Sp., 3 uC. Total 96.

9a^{1hf}. Professor RIPLEY, assisted by Mr. J. E. GARDNER. — Problems of Labor.

2 Gr., 16 Se., 31 Ju., 5 So., 3 Fr., 3 Sp., 2 uC., 2 Di. Total 64.

9b^{2hf}. Professor RIPLEY, assisted by Mr. HERMAN GOEPPER and Mr. C. A. WHIPPLE. — Economics of Corporations.

7 Gr., 1 G.S., 39 Se., 60 Ju., 12 So., 3 Fr., 6 Sp., 1 uC. Total 129.

16 ¹/₂f. Professor BULLOCK and Dr. HUSE. — American Taxation.

6 Gr., 12 Se., 10 Ju., 2 So., 1 Sp. Total 31.

24 ²/₃f. Dr. HOLCOMBE. — Problems of Municipal Ownership and Control in Europe and Australia. 4 Se., 21 Ju., 5 So., 1 Fr., 3 Sp. Total 34.

IV. COURSES PREPARING FOR A BUSINESS CAREER

For Undergraduates and Graduates:—

18. Asst. Professor COLE, assisted by Messrs. J. J. KAPLAN, R. M. JOHNSON, and H. B. PLATT. — Principles of Accounting.

3 Gr., 3 G.S., 31 G.B., 99 Se., 56 Ju., 9 So., 1 Fr., 7 Sp., 1 uC., 2 Law.

Total 212.

21 ¹/₂f. Professor WYMAN, assisted by Messrs. BRANNAN and LYETH. — Principles of Law governing Industrial Relations.

3 Gr., 2 G.B., 113 Se., 56 Ju., 5 So., 3 Sp., 1 Se. Total 183.

V. SOCIOLOGY

For Undergraduates and Graduates:—

3. Professor CARVER, assisted by Mr. J. S. DAVIS. — Principles of Sociology. Theories of Social Progress.

12 Gr., 12 Se., 26 Ju., 9 So., 2 Fr., 2 Sp., 2 uC., 5 Di. Total 70.

(See Social Ethics)

Social Ethics 1. Professor PEABODY, Dr. McCONNELL, Dr. FORD, and Dr. FOERSTER. — The Problems of Poor-Relief, the Family, Temperance, and various phases of the Labor Question in the light of ethical theory.

7 Gr., 16 Se., 29 Ju., 12 So., 3 Fr., 1 Sp., 5 uC., 4 Di., 3 And. Total 80.

Social Ethics 2 ²/₃f. Dr. BRACKETT. — Practical Problems of Social Service: Public Aid, Charity, and Neighborhood Work.

8 Gr., 3 Se., 3 Ju., 1 So., 1 uC., 2 Di. Total 18.

Social Ethics 4 ¹/₂f. Professor PEABODY, Dr. BRACKETT, Dr. McCONNELL, Dr. FORD, and Dr. FOERSTER. — Selected Topics in Social Ethics.

8 Gr., 8 Se., 1 So., 2 Di. Total 19.

Social Ethics 5 ²/₃f. Dr. McCONNELL. — The Moral Responsibilities of the Modern State.

5 Gr., 18 Se., 12 Ju., 2 So., 1 uC. Total 38.

Social Ethics 6 ²/₃f. Dr. FOERSTER. — Social Amelioration in Europe.

6 Gr., 6 Se., 4 Ju., 1 Sp., 2 uC. Total 19.

†Social Ethics 20a. Professor PEABODY. — Seminary of Social Ethics. Religion and the Social Question. 5 Gr., 1 Se., 2 Ju., 12 Di., 1 And. Total 21.

Social Ethics 20c. Dr. BRACKETT. — The School for Social Workers.

6 Gr., 1 Se., 2 Sp., 1 And. Total 10.

Social Ethics 20d. Dr. BRACKETT. — The School for Social Workers.

2 Sp. Total 2.

VI. COURSES OF RESEARCH

Primarily for Graduates:—

- 20a. Professor GAY.—The Economic History of England. 3 Gr. Total 3.
 ‡20b. Professor CARVER.—The Laws of Production and Valuation. 2 Gr. Total 2.
 20c. Professor RIPLEY.—Principles of Corporation Finance. 1 Gr. Total 1.

THE SEMINARY IN ECONOMICS

Meetings were held by instructors and advanced students for the presentation of the results of investigation.

Business

I. ACCOUNTING

Economics 18. Asst. Professor COLE.—Principles of Accounting. (See Economics.)

3 Gr., 3 G.S., 31 G.B., 99 Se., 56 Ju., 9 So., 1 Fr., 7 Sp., 1 uC., 2 Law. Total 212.

Business 1. Asst. Professor COLE.—Accounting Practice. 9 G.B. Total 9.

Business 2. Asst. Professor COLE.—Accounting Problems. 2 G.B. Total 2.

II. COMMERCIAL LAW

Business 5. Asst. Professor SCHAUB.—Commercial Contracts.

1 Gr., 26 G.B., 1 Law. Total 28.

Business 6. Asst. Professor SCHAUB.—Law of Business Associations.

7 G.B. Total 7.

III. ECONOMIC RESOURCES

Business 10. Mr. CHERINGTON.—Economic Resources of the United States.

3 Gr., 1 G.S., 32 G.B., 1 Law. Total 37.

Business 11 ¹/₂hf. Mr. CHERINGTON.—Commercial Organization and Methods.

12 G.B. Total 12.

Business 12 ²/₃hf. Mr. M. T. COPELAND.—Economic Resources and Commercial Policy of the Chief European States.

3 G.B. Total 3.

Business 14 ²/₃hf. Mr. DOWNS and the following lecturers: Messrs. IGNACIO CALDERÓN, G. L. DUVAL, T. A. EDDY, G. B. KULENKAMPFF, JOAQUIM NABUCO, C. M. PEPPER, L. S. ROWE, J. L. SCHAEFER, W. H. SCHOFF, HERMANN SIELCKEN, W. H. STEVENS, R. DE C. WARD, and others.—Economic Resources and Commercial Organization of Central and South America.

7 G.B., 2 Law. Total 9.

IV. INDUSTRIAL ORGANIZATION

Business 17 ¹/₂hf. Professor GAY and Mr. J. N. GUNN, and the following lecturers: Messrs. C. G. L. BARTH, E. J. BLISS, H. E. DAVIDSON, W. B. DICKSON, J. O. FAGAN, E. A. FILENE, H. L. GANTT, H. F. J. PORTER, RUSSELL ROBB, GERSHOM SMITH, J. E. STERRETT, and F. W. TAYLOR.—Industrial Organization.

1 Gr., 37 G.B., 1 Law. Total 39.

Business 18. Mr. GUNN.—Industrial Organization (advanced course).

8 G.B., 1 Law. Total 9.

V. BANKING AND FINANCE

Business 21. Asst. Professor SPRAGUE. — Banking.	9 G.B.	Total 9.
Business 22. Asst. Professor SPRAGUE. — Banking (advanced course).	2 G.B.	Total 2.
Business 24 ^{2hf} . Mr. J. F. MOORS. — Investments.	1 G.S., 24 G.B., 1 Law.	Total 26.
Business 25 ^{2hf} . Asst. Professor SPRAGUE and the following lecturers: Messrs. A. L. DICKINSON, J. B. DILL, F. H. DIXON, W. J. FILBERT, F. P. FISH, R. F. HERRICK, J. F. HILL, C. M. HOUGH, A. H. JOLINE, T. W. LAMONT, G. O. MAY, VICTOR MORAWETZ, G. W. PERKINS, F. B. SEARS, F. E. SNOW, H. L. STIMSON, F. W. WHITRIDGE, and G. W. WICKERSHAM. — Corporation Finance.	1 Gr., 1 G.S., 32 G.B., 3 Law.	Total 37.

VI. TRANSPORTATION

Business 28. Mr. CUNNINGHAM. — Railroad Operation.	5 G.B., 2 Law.	Total 7.
Business 29. Mr. RICH. — The Railroad and the Shipper: The Theory and Practice of Rate Making, with Special Reference to the Interstate Commerce Act.	2 G.B.	Total 2.
Business 30 ^{2hf} . Asst. Professor COLE. — Railroad Accounting.	3 G.B.	Total 3.
Business 32. Mr. CUNNINGHAM. — Railroad Operation (advanced course).	3 G.B.	Total 3.

VII. INSURANCE

Business 35a ^{1hf} . Mr. MEDLICOTT. — Fire Insurance.	5 G.B.	Total 5.
Business 35b ^{2hf} . Mr. DOW. — Life Insurance.	2 G.B.	Total 2.

Philosophy

Primarily for Undergraduates: —

A-E. INTRODUCTION TO PHILOSOPHY

A ^{1hf} . Professor PALMER. — History of Ancient Philosophy.	1 Se., 40 Ju., 65 So., 85 Fr., 5 Sp., 15 uC.	Total 211.
B ^{2hf} . Professor SANTAYANA. — History of Modern Philosophy.	18 Ju., 26 So., 45 Fr., 5 Sp., 11 uC.	Total 105.
C ^{1hf} . Professor ROYCE. — Logic.	4 Gr., 2 Se., 20 Ju., 22 So., 18 Fr., 1 Sp., 15 uC.	Total 32.
D ^{1hf} . Asst. Professor R. B. PERRY. — General Problems of Philosophy.	2 Gr., 6 Ju., 14 So., 5 Fr., 2 Sp., 8 uC.	Total 37.
E ^{2hf} . Professor MÜNSTERBERG. — Psychology.	4 Gr., 2 G.S., 1 Se., 57 Ju., 86 So., 91 Fr., 9 Sp., 28 uC.	Total 278.

For Undergraduates and Graduates: —

2 ^{2hf} . Asst. Professor HOLT. — Advanced Psychology.	9 Gr., 4 Se., 4 Ju., 1 So., 1 Fr., 3 Sp., 2 Di.	Total 24.
14 ^{1hf} . Asst. Professor HOLT. — Experimental Psychology.	5 Gr., 1 Se., 6 Ju., 2 So., 3 Sp., 1 uC., 1 Di.	Total 19.

- 23 ¹*hf.* Asst. Professor HOLT. — History of Psychology. The History of Selected Psychological Problems. 4 Gr., 1 Se. Total 5.
- 13a ¹*hf.* Asst. Professor YERKES. — Comparative Psychology. Mental Development in the Race. 6 Gr., 2 Se., 3 Ju., 4 So., 1 Fr., 1 Sp. Total 17.
- 21a ²*hf.* Asst. Professor YERKES. — Animal Behavior. The Evolution of Organic Activity. 2 Gr., 2 Se., 2 Ju., 7 So., 1 Fr., 1 Sp. Total 15.
- 3 ²*hf.* Asst. Professor R. B. PERRY. — Philosophy of Nature, with special reference to Man's Place in Nature. Conceptions of nature in the light of moral and religious interests. 10 Gr., 11 Se., 10 Ju., 7 So., 1 Fr., 2 Sp., 2 uC., 1 And. Total 44.
4. Professor PALMER. — Ethics. The Theory of Morals, considered constructively. 10 Gr., 13 Se., 14 Ju., 5 So., 1 Fr., 1 uC., 4 Sp., 4 Di., 2 And. Total 54.
22. Professor SANTAYANA. — Metaphysics. The Order of Knowledge and the Order of Nature. 10 Gr., 2 Se., 7 Ju., 1 So., 1 Fr., 1 uC. Total 22.
- 24 ²*hf.* Professor ROYCE. — Contemporary Philosophical Issues. A Study of Pragmatism, the New Realism, and recent forms of Individualism. 11 Gr., 8 Se., 5 Ju., 3 So., 3 Fr., 1 Sp., 2 uC., 6 Di. Total 39.
- 16 ¹*hf.* Professor FENN. — Theism. 3 Gr., 14 Di., 3 And. Total 20.
15. Professor ROYCE. — Advanced Logic. Modern doctrines regarding the thinking process and regarding the principles of the Exact Sciences. Outlines of a Theory of Knowledge. The Relations of Deduction and Induction. 8 Gr., 1 Se., 1 Ju., 1 So., 1 Sp., 1 Di. Total 13.
18. Asst. Professor WOODS. — Philosophical Systems of India, with special reference to Vedanta, Sankhya, and Yoga. 1 Gr., 1 Ju., 1 Sp., 1 uC., 2 Di. Total 6.
12. Dr. B. A. G. FULLER. — Greek Philosophy, with special reference to Plato. 8 Gr., 9 Se., 13 Ju., 4 So., 1 Sp., 1 uC. Total 36.
- 7a ¹*hf.* Asst. Professor R. B. PERRY. — History of Ethics. The Early English Moralists. Hobbs, the Cambridge Platonists, Shaftesbury, Butler, and Adam Smith. 6 Gr., 3 Se., 2 Ju., 1 So., 1 Sp., 1 Di. Total 14.
- 11a ¹*hf.* Asst. Professor WOODS. — Descartes, Spinoza, and Leibnitz. 6 Gr., 2 Se., 4 So., 1 Sp. Total 13.
- 11b ²*hf.* Asst. Professor WOODS. — English Philosophy from Locke to Hume. 8 Gr., 2 So., 1 Fr., 2 Sp. Total 13.
- 8 ¹*hf.* Professor ROYCE. — The Kantian Philosophy. 6 Gr., 1 Se., 3 Ju., 2 So., 1 Fr., 1 Sp., 6 Di., 2 And. Total 22.
17. Professor E. C. MOORE. — History of Christian Thought since Kant. 3 Gr., 10 Di., 1 And. Total 14.
- 6 ¹*hf.* Professor SANTAYANA. — Three Philosophical Poets. Lucretius, Dante, and Goethe. 6 Gr., 19 Se., 15 Ju., 8 So., 2 Fr., 1 Sp., 1 uC. Total 52.
- 10 ¹*hf.* Professor SANTAYANA. — Philosophy of History. Ideals of Society, Religion, Art, and Science, in their historical development. 9 Gr., 13 Se., 10 Ju., 1 So., 2 Fr., 1 Sp., 1 uC., 1 Di. Total 38.

Primarily for Graduates:—

COURSES OF SPECIAL STUDY

- †20a. Professor MÜNSTERBERG, Asst. Professor HOLT, and Asst. Professor YERKES. — Psychological Laboratory. Experimental investigations in Human and Animal Psychology by advanced students.
10 Gr., 2 Di., 1 R. Total 13.
- 20b. Professor MÜNSTERBERG. — Psychological Seminary. Applied Psychology, with especial reference to Medicine, Education, and Law.
11 Gr., 1 Se., 1 Sp., 5 Di. Total 18.
- †20c. Professor ROYCE. — Logical Seminary. A Comparative Study of those Concepts of Human Thought which have to do with the Relations of Cause and Effect.
5 Gr., 1 Sp., 4 Di., 4 R. Total 14.
- †20d. Professor PALMER. — Ethical Seminary. The Systematization of Ethics.
5 Gr., 1 Di., 1 R. Total 7.
- †20e. Asst. Professor R. B. PERRY. — Seminary in the Theory of Knowledge. Consciousness, Knowledge, and Truth. Contemporary Tendencies: Idealism, Pragmatism, and Realism.
8 Gr., 3 Di. Total 11.
- 20f. Professor ROYCE. — Seminary on the Aims and Methods of the Teaching and Study of Philosophy.
1 Gr. Total 1.
- †20g. Asst. Professor YERKES. — Seminary in Animal Psychology. The History of the Problems and Methods of Animal Psychology. 3 Gr. Total 3.
- 20h^{2hf}. Professor E. C. MOORE. — Seminary in the Philosophy of Religion.
1 Gr., 7 Di., 1 And. Total 9.

Social Ethics

For Undergraduates and Graduates:—

1. Professor PEABODY, Dr. McCONNELL, Dr. FORD, and Dr. FOERSTER. — The problems of Poor-Relief, the Family, Temperance, and various phases of the Labor Question, in the light of ethical theory.
7 Gr., 16 Se., 29 Ju., 12 So., 3 Fr., 1 Sp., 5 uC., 4 Di., 3 And. Total 80.
- 2^{2hf}. Dr. BRACKETT. — Practical Problems of Social Service, Public Aid, Charity, and Neighborhood Work.
8 G., 3 Se., 3 Ju., 1 So., 1 uC., 2 Di. Total 18.
- 4^{1hf}. Selected Topics in Social Ethics.
Professor PEABODY. — The Ethical Approach to the Social Question.
Dr. BRACKETT. — Sources of Relief in Cases of Need.
Dr. McCONNELL. — The Ethical Relations of the State to Industrial Affairs.
Dr. FORD. — The Ethical Aspects of Industrial Coöperation.
Dr. FOERSTER. — The Ethics of Immigration.
8 Gr., 8 Se., 1 So., 2 Di. Total 19.
- 5^{2hf}. Dr. McCONNELL. — The Moral Responsibilities of the Modern State.
5 Gr., 18 Se., 12 Ju., 2 So., 1 uC. Total 38.
- 6^{2hf}. Dr. FOERSTER. — Social Amelioration in Europe.
6 Gr., 6 Se., 4 Ju., 1 Sp., 2 uC. Total 19.

Primarily for Graduates:—

COURSES OF RESEARCH

‡20a. Professor PEABODY.—Seminary of Social Ethics. Religion and the Social Question. 5 Gr., 1 Se., 2 Ju., 12 Di., 1 And. Total 21.

20c. Dr. BRACKETT.—The School for Social Workers. 6 Gr., 1 Se., 2 Sp., 1 And. Total 10.

20d. Dr. BRACKETT.—The School for Social Workers. 2 Sp. Total 2.

Education

For Undergraduates and Graduates:—

1. Asst. Professor A. O. NORTON.—History of Educational Practices and Theories. 8 Gr., 3 Se., 8 Ju., 3 So., 1 Sp. Total 23.

2a^{1hf}. Professor HANUS.—Introduction to the Study of Education. Discussion of Educational Principles. 11 Gr., 30 Se., 24 Ju., 24 So., 5 Fr., 4 Sp., 1 uC. Total 99.

2b^{2hf}. Professor HANUS.—School Administration as a Branch of Municipal Affairs. Contemporary Tendencies and Problems. 5 Gr., 20 Se., 16 Ju., 10 So., 2 Fr., 3 Sp. Total 56.

5a^{1hf}. Asst. Professor A. O. NORTON.—Modern Theories of Education. Critical study of recent views. 3 Se., 2 Ju., 1 So., 4 uC., 1 Di. Total 11.

5b^{2hf}. Asst. Professor A. O. NORTON.—The Education of the Individual. Study and treatment of both unusual and normal types. 8 Gr., 5 Se., 9 Ju., 1 So., 3 uC., 1 Di. Total 27.

6a^{1hf}. Mr. HOLMES.—Educational Theory in the Early Nineteenth Century. Froebel. 6 Gr., 1 Se., 2 uC. Total 9.

6b^{2hf}. Mr. HOLMES.—Educational Theory in the Early Nineteenth Century. Pestalozzi, Herbart, and their Followers. The Influence of Pestalozzi, Froebel, and Herbart on the Development of Modern Schools. 10 Gr., 1 Se., 3 Ju., 1 So., 2 uC. Total 17.

Primarily for Graduates:—

‡3a. Professor HANUS and Mr. HOLMES.—Organization and Management of State and City Schools and School Systems. Rural School Systems. Duties and Opportunities of Superintendents and Principals. 11 Gr., 1 Se., 1 So., 1 uC., 1 R. Total 15.

‡3b. Professor HANUS and Mr. HOLMES.—Secondary Education: Public High Schools, Endowed and Private Schools. 11 Gr., 11 Se., 2 Ju., 2 uC., 4 R. Total 30.

3c^{2hf}. Mr. HOLMES.—Elementary Education. Programmes of study, equipment, methods. 5 Gr., 2 Ju., 1 So., 1 uC. Total 9.

SEMINARY COURSES

‡20a. Professor HANUS.—Seminary. Contemporary Problems in Education. 8 Gr., 1 uC., 2 R. Total 11.

‡20b. Asst. Professor A. O. NORTON.—Seminary in the History of Education. 2 Gr. Total 2.

The Fine Arts

Primarily for Undergraduates:—

1. Asst. Professor POPE and Mr. MOWER, assisted by Mr. R. E. JONES. — Principles of Drawing and Painting, with elementary practice.
5 G.S., 2 Se., 9 Ju., 15 So., 27 Fr., 2 Sp., 2 uC. Total 62.

For Undergraduates and Graduates:—

3. Asst. Professor CHASE, assisted by Mr. KIMBALL. — History of Ancient Art. Architecture, Sculpture, and Painting in Egypt, Assyria, and Greece, with some account of the lesser arts.
2 Gr., 2 G.S., 20 Se., 26 Ju., 29 So., 8 Fr., 4 Sp., 1 uC. Total 92.
4. Mr. FITZPATRICK, assisted by Mr. EDGELL. — The Fine Arts of the Middle Ages and the Renaissance.
1 Gr., 16 Se., 35 Ju., 6 So., 2 Fr., 1 Sp. Total 61.
6. Asst. Professor POPE and Mr. POST. — Italian Painting: its history and character.
1 Gr., 6 Ju., 1 So., 1 Fr., 1 Sp. Total 10.

Primarily for Graduates:—

COURSE OF SPECIAL STUDY

- 20b^{2hf}. Mr. E. W. FORBES. — Florentine Painting.
2 Gr., 2 Se., 1 Ju., 1 uC. Total 6.

Architecture

For Undergraduates and Graduates:—

- 1a. Professor H. L. WARREN and Mr. E. T. PUTNAM, assisted by Mr. FROST — Technical and Historical Development of the Ancient Styles, with especial reference to Classic Architecture.
2 G.S., 4 Ju., 5 So., 3 Fr., 2 Sp. Total 16.
- 1c. Professor H. L. WARREN and Mr. E. T. PUTNAM, assisted by Mr. FROST. — Technical and Historical Development of Renaissance and Modern Architecture.
1 Gr., 2 G.S., 4 Se., 10 Ju., 4 So., 1 Fr., 3 Sp. Total 25.
- 2a. Mr. E. T. PUTNAM, assisted by Mr. FROST. — Elementary Architectural Drawing. Elements of Architectural Form. The Orders.
2 G.S., 1 Se., 4 Ju., 3 So., 2 Sp. Total 12.
- 2b. Asst. Professor MOWLL. — Stereotomy, Shades and Shadows, and Perspective.
2 G.S., 3 Se., 5 Ju., 4 So., 1 Sp. Total 15.
- 3a. Asst. Professor POPE and Mr. MOWER. — Freehand Drawing.
3 G.S., 7 Se., 10 Ju., 10 So., 3 Fr., 1 Sp. Total 34.
- 3b. Mr. H. B. WARREN and Mr. MURPHY. — Freehand Drawing (second course). Drawing from the Life.
2 G.S., 2 Se., 2 Ju., 1 So., 1 Fr., 3 Sp. Total 11.
- 4a. Asst. Professors MOWLL and KILLAM. — Elementary Architectural Design.
5 Se., 3 Ju., 2 So., 1 Sp. Total 11.
- 5a. Asst. Professor KILLAM. — Construction of Buildings: Materials and Methods.
2 G.S., 9 Se., 10 Ju., 5 So., 1 Fr., 4 Sp. Total 31.

7a¹hf. Asst. Professor POPE, assisted by Mr. E. O. PARKER. — The Theory of Pure Design. 1 Gr., 1 Se., 1 Ju., 2 So., 3 Fr., 1 Sp., 1 uC. Total 10.

7b²hf. Dr. ROSS, assisted by Mr. E. O. PARKER. — On Design in the Terms of Drawing and Painting.

2 G.S., 2 Se., 2 Ju., 4 So., 1 Fr., 1 Sp., 1 uC. Total 13.

Primarily for Graduates: —

3c. Mr. H. B. WARREN and Mr. MURPHY. — Freehand Drawing (third course). Architectural Subjects and from the Life.

2 G.S., 1 Se., 1 Ju., 2 Sp. Total 6.

4b. Asst. Professor MOWLL. — Architectural Design (second course).

1 G.S., 1 Se., 1 Ju., 1 Sp. Total 4.

4c. Professor H. L. WARREN, with the coöperation, successively, of Messrs. F. M. DAY and R. A. CRAM. — Architectural Design (third course).

2 G.S., 1 Sp. Total 3.

5d²hf. Asst. Professor KILLAM. — Resistance of Materials. Elementary Structural Design.

1 G.S., 2 Se., 2 Ju. Total 5.

6 hf. Mr. GARBUTT. — Modelling.

2 G.S., 1 Se. Total 3.

COURSE OF SPECIAL STUDY

20c. Asst. Professor KILLAM. — Advanced Practice in Construction of Buildings.

1 Sp. Total 1.

Landscape Architecture

For Undergraduates and Graduates: —

1. Asst. Professor PRAY. — Principles of Landscape Architecture.

4 G.S., 9 Se., 24 Ju., 20 So., 10 Fr., 1 Sp. Total 68.

Primarily for Graduates: —

2. Mr. H. V. HUBBARD, with occasional instruction by Asst. Professor PRAY. — Practice in Design (first course).

7 G.S. Total 7.

3. Asst. Professor PRAY and Mr. H. V. HUBBARD, with occasional instruction by Professor OLMSTED. — Practice in Design (second course). Park and city planning.

2 G.S., 1 Se. Total 3.

4. Mr. H. V. HUBBARD. — Principles of Construction.

3 G.S. Total 3.

5. Asst. Professor PRAY and Mr. H. V. HUBBARD. — Principles of Construction (second course).

4 G.S. Total 4.

6. Mr. WATSON. — Elements of Horticulture.

4 G.S. Total 4.

7. Mr. WATSON. — Plants in Relation to Planting Design.

4 G.S., 1 Sp. Total 5.

8. Mr. WATSON. — Planting Design (first course).

3 G.S. Total 3.

9. Mr. WATSON. — Planting Design (second course). Advanced work following the methods of Course 8.

3 G.S., 1 Se. Total 4.

10. Asst. Professor PRAY, with occasional lectures by Professor OLMSTED. — Principles of City Planning, illustrated by a critical study of examples.

6 G.S. Total 6.

11. Mr. H. V. HUBBARD, with occasional instruction by Asst. Professor PRAY.—
Elementary Drafting, with special reference to forms used in Landscape
Design. 6 G.S. Total 6.

Music

For Undergraduates and Graduates:—

1. Mr. HEILMAN, assisted by Dr. DAVISON.—Harmony.
3 Se., 8 Ju., 6 So., 15 Fr., 1 uC. Total 33.
2. Mr. HEILMAN.—Counterpoint.
1 Gr., 2 Se., 1 Ju., 1 So., 1 Fr., 1 Sp. Total 7.
- 2a hf. Asst. Professor SPALDING.—Vocal Composition; part-writing, strict and
free, together with analysis of choral works of the great composers.
1 Gr., 3 Se., 7 So., 1 Fr., 2 Sp. Total 14.
3. Mr. HILL.—History of Music from the time of Palestrina to the present day.
5 Se., 13 Ju., 26 So., 24 Fr., 1 Sp., 1 uC. Total 70.
4. Asst. Professor SPALDING and Mr. HEILMAN.—The Appreciation of Music;
analytical study of masterpieces from the point of view of the listener.
1 Gr., 7 Se., 10 Ju., 13 So., 2 Fr. Total 33.
- 4a hf. Mr. HEILMAN.—Brahms, Tchaikovsky, and Franck: an analytical and
appreciative study of their works, with reference to style, structure, and
content. 1 G.B., 7 Se., 3 So. Total 11.
- 5 hf. Asst. Professor SPALDING.—Canon and Fugue. 1 G.B., 1 So. Total 2.

Primarily for Graduates:—

- ‡6. Asst. Professor SPALDING.—Instrumentation.
1 Gr., 1 Se., 1 Ju., 1 So., 1 Sp. Total 5.
7. Mr. HILL.—Free Composition, with special reference to pianoforte style
and ensemble writing. 3 Se. Total 3.

Mathematics

Primarily for Undergraduates:—

- F. Asst. Professors BOUTON and WHITEMORE.—Trigonometry and Plane
Analytic Geometry. 1 Se., 9 Ju., 13 So., 81 Fr., 5 Sp., 2 uC. Total 111.
- A¹hf. Mr. EVANS.—Logarithms; Plane and Spherical Trigonometry.
1 Gr., 3 Se., 5 Ju., 5 So., 12 Fr., 1 Sp. Total 27.
- C. Asst. Professor COOLIDGE.—Plane and Solid Analytic Geometry (extended
course). 2 Gr., 4 So., 45 Fr., 4 uC. Total 55.
- D²hf. Mr. EVANS.—Algebra. 1 Se., 3 Ju., 8 So., 27 Fr., 2 Sp. Total 41.
- E¹hf. Asst. Professor WHITEMORE.—Solid Geometry.
1 Ju., 6 So., 13 Fr., 2 Sp. Total 22.
- H²hf. Asst. Professors HUNTINGTON and COOLIDGE, and Dr. H. N. DAVIS.—A
Brief Survey of Mathematics for the General Student.
3 Se., 8 Ju., 9 So., 26 Fr., 2 Sp., 4 uC. Total 52.
2. Professor OSGOOD.—Differential and Integral Calculus (first course).
2 Gr., 2 G.S., 5 Se., 23 Ju., 37 So., 6 Fr., 2 Sp., 2 uC. Total 79.
4. Dr. H. N. DAVIS.—The Elements of Mechanics.
3 Gr., 1 G.S., 2 Se., 10 Ju., 5 So., 1 Fr., 1 Sp., 1 uC. Total 24.

For Undergraduates and Graduates:—

3. Professor BYERLY.—Introduction to Modern Geometry and Modern Algebra.
5 Gr., 1 Se., 7 Ju., 4 So. Total 17.
5. Professor BYERLY.—Differential and Integral Calculus (second course).
7 Gr., 1 Se., 10 Ju., 2 uC. Total 20.
- 14a ²hf. Asst. Professor WHITTEMORE.—Algebra. The Properties of Polynomials; Invariants. 6 Gr. Total 6.
9. Asst. Professor COOLIDGE.—Probability. 1 Gr., 1 Ju. Total 2.
- 24 ¹hf. Asst. Professor BOUTON.—The Theory of Numbers.
3 Gr., 1 Se. Total 4.
- 18 ²hf. Asst. Professor BOUTON.—The Elementary Theory of Differential Equations. 4 Gr., 2 Se., 2 Ju. Total 8.
6. Mr. EVANS.—Vector Analysis and Quaternions.
9 Gr., 3 Se., 1 Sp. Total 13.
- 32a ¹hf. Asst. Professor WHITTEMORE.—Celestial Mechanics. 4 Gr. Total 4.

Primarily for Graduates:—

- ‡13. Professor OSGOOD.—The Theory of Functions (introductory course).
10 Gr., 4 Se. Total 14.
- ‡22 ¹hf. Asst. Professor WHITTEMORE.—Introduction to the Differential Geometry of Curves and Surfaces. 3 Gr. Total 3.
- ‡7. Asst. Professor COOLIDGE.—Algebraic Plane Curves.
2 Gr., 1 Se., 1 Ju. Total 4
- ‡27 ²hf. Asst. Professor HUNTINGTON.—The Fundamental Concepts of Mathematics. 2 Gr., 2 Se. Total 4.
- ‡10. Professors BYERLY and B. O. PEIRCE.—Trigonometric Series. Introduction to Spherical Harmonics. The Potential Function.
6 Gr., 3 Se. Total 9.
- ‡17. Professor OSGOOD.—The Theory of Functions (advanced course). Linear Differential Equations. 10 Gr. Total 10.
- ‡25. Asst. Professor BOUTON.—Geometrical Transformations, with special reference to the work of Sophus Lie. 9 Gr. Total 9.

‡SEMINARY IN GEOMETRY

- Asst. Professors BOUTON, WHITTEMORE, and COOLIDGE. 4 Gr. Total 4.

COURSES OF READING AND RESEARCH

Reading Courses

- ‡20g. Asst. Professor WHITTEMORE.—Dynamics. 1 Gr. Total 1.

Courses of Research

- ‡20d. Professor OSGOOD.—Topics in the Theory of Functions. 1 Gr. Total 1.
- ‡20e. Asst. Professor BOUTON.—Topics in the Theory of Differential Equations. 2 Gr. Total 2.
- ‡20f. Asst. Professor COOLIDGE.—Topics in Higher Geometry. 1 Gr. Total 1.

SPECIAL COURSE

Asst. Professor WHITTEMORE. — Pure Geometry.

1 Gr. Total 1.

Astronomy

Primarily for Undergraduates: —

1. Professor WILLSON and Dr. DUNCAN. — Descriptive Astronomy.

1 G.S., 5 Se., 20 Ju., 18 So., 7 Fr., 6 Sp., 2 uC. Total 59.

2²hf. Professor WILLSON. — Practical Astronomy. Application of Astronomy to Navigation and Exploration.

1 Gr., 1 G.S., 7 Se., 9 Ju., 4 So., 2 Fr., 2 Sp. Total 26.

*For Undergraduates and Graduates: —*4²hf. Dr. DUNCAN. — The Determination of Orbits.

1 Ju. Total 1.

Primarily for Graduates: —

5. Professor WILLSON. — Practical Astronomy. Instruments of the fixed observatory. Meridian circle; almucantar; equatorial instrument; absolute determinations.

1 Gr., 1 Ju., 1 Sp. Total 3.

Physics

Primarily for Undergraduates: —

B. Professor HALL, Asst. Professor G. W. PIERCE, and Mr. CHAFFEE. — Elementary Physics.

1 Se., 1 Ju., 9 So., 20 Fr., 1 Sp., 7 uC. Total 39.

C. Professor SABINE, Asst. Professors G. W. PIERCE and LYMAN, Dr. H. W. MORSE, Dr. H. N. DAVIS, Mr. HAYES, and Dr. BRIDGMAN. — Experimental Physics. Mechanics, Sound, Light, Magnetism, and Electricity.

7 Gr., 2 G.S., 5 Se., 11 Ju., 61 So., 82 Fr., 6 Sp., 12 uC. Total 186.

1. Professor HALL and Mr. CHAFFEE. — General Descriptive Physics.

1 Gr., 1 G.S., 1 Se., 4 Ju., 11 So., 17 Fr., 2 Sp., 2 uC. Total 39.

11¹hf. Dr. H. W. MORSE. — The Theory of Primary and Secondary Batteries.

1 G.S., 2 Se., 5 Ju., 5 So., 1 Fr., 1 Sc. Total 15.

*For Undergraduates and Graduates: —*2²hf. Professor SABINE and Asst. Professor LYMAN. — Light.

4 Gr., 2 Ju. Total 6.

3. Professor B. O. PEIRCE, Dr. H. N. DAVIS, and Mr. L. A. BABBITT. — Electrostatics, Electrokinematics, and parts of Electromagnetism.

4 Gr., 2 G.S., 10 Ju., 3 So., 1 Sp., 1 Sc. Total 21.

12¹hf. Asst. Professor LYMAN. — Electric Conduction in Gases and Radioactivity, with special reference to Modern Theories of the Constitution of Matter.

4 Gr., 4 Se., 4 Ju., 1 Sp. Total 13.

17²hf. Asst. Professor G. W. PIERCE. — Electric Waves and their Application to Wireless Telegraphy.

4 Gr., 2 G.S., 4 Se., 1 Ju., 1 So. Total 12.

4. Professor TROWBRIDGE, Asst. Professors G. W. PIERCE and LYMAN. — Magnetism, Electromagnetism, and Electrodynamics.

3 Gr., 3 G.S., 2 Ju. Total 8.

5. Professor SABINE. — Light. 5 Gr., 2 Ju. Total 7
- 6a ¹hf. Professor HALL. — Elements of Thermodynamics. 3 Gr., 2 Se., 1 Ju., 1 Sp. Total 7.
- 6b ²hf. Professor HALL. — Modern Developments and Applications of Thermodynamics. 3 Gr., 1 Se., 1 Sp. Total 5.
- 14 ²hf. Dr. H. W. MORSE. — The Theory of Photography. 1 Gr., 3 Se., 3 Ju., 1 So. Total 8.

Primarily for Graduates: —

- ‡10. Professor B. O. PEIRCE. — The Mathematical Theory of Electricity and Magnetism (second course). 8 Gr. Total 8.

COURSES OF RESEARCH

- 20b. Professor B. O. PEIRCE. — Electricity and Magnetism. 1 Gr. Total 1.
- 20d. Professor SABINE. — Light and Heat. 4 Gr. Total 4.
- 20f. Dr. H. W. MORSE. — Molecular Physics. 1 Gr. Total 1.
- 20g. Asst. Professor LYMAN. — Light of Short Wave-Lengths. 2 Se. Total 2.
- 20h. Dr. H. N. DAVIS. — Heat. 2 Gr. Total 2.

Chemistry

Primarily for Undergraduates: —

1. Professor C. L. JACKSON and Mr. G. L. KELLEY, assisted by Messrs. BIGELOW, CARLETON, FISKE, and RIEGEL. — Descriptive Inorganic Chemistry. 2 Gr., 2 G.S., 4 Se., 23 Ju., 49 So., 167 Fr., 12 Sp., 7 uC. Total 266.
- 2 ¹hf. Asst. Professor TORREY, assisted by Mr. CARDARELLI. — Organic Chemistry (elementary course). 2 Gr., 1 G.S., 13 Se., 15 Ju., 33 So., 11 Fr., 4 Sp., 4 uC. Total 83.
3. Professor SANGER and Dr. G. S. FORBES, assisted by Messrs. COOMBS, BOLTON, CONROY, and WHITING. — Qualitative Analysis. 1 Gr., 1 G.S., 6 Se., 10 Ju., 33 So., 6 Fr., 2 Sp., 7 uC. Total 66.

For Undergraduates and Graduates: —

4. Asst. Professor BAXTER, assisted by Dr. C. J. MOORE. — Quantitative Analysis, gravimetric and volumetric. 2 Gr., 3 Se., 10 Ju., 3 So., 1 Fr., 1 Sp., 1 uC. Total 21.
- 8 ²hf. Professor RICHARDS and Dr. G. S. FORBES. — Elementary Theoretical and Physical Chemistry, including the Historical Development of Chemical Theory. 6 Gr., 8 Se., 13 Ju., 28 So., 7 Fr., 3 Sp., 5 uC. Total 70.
11. Professor SANGER and Mr. RIEGEL. — Industrial Chemistry. 5 Gr., 1 Se., 1 Ju. Total 7.
- 9 ¹hf. Asst. Professor BAXTER, assisted by Mr. HARRIS. — Advanced Quantitative Analysis. 7 Gr., 2 Se., 2 Ju., 1 Sp. Total 12.
- 10 ²hf. Asst. Professor BAXTER, assisted by Mr. HARRIS. — Gas Analysis. 8 Gr., 1 Se., 3 Ju., 1 Sp., 1 uC. Total 14.

5. Asst. Professor TORREY and Mr. KELLEY, assisted by Mr. ESSELEN.—
The Carbon Compounds.

9 Gr., 2 Se., 14 Ju., 3 So., 2 Sp., 1 uC. Total 31.

- 5a hf. Asst. Professor TORREY, assisted by Mr. ESSELEN.—The Carbon Compounds.

7 Gr., 2 Se., 14 Ju., 2 So., 3 Sp., 1 uC. Total 29.

Primarily for Graduates:—

6. Professor RICHARDS and Dr. G. S. FORBES.—Physical Chemistry.

8 Gr., 3 Se., 1 Ju. Total 12.

- 12 1hf. Asst. Professor BAXTER.—Photochemistry, including the use of Optical Instruments in Chemistry.

2 Gr., 2 Se. Total 4.

- 7 2hf. Dr. G. S. FORBES.—Electrochemistry.

5 Gr., 2 Se., 1 Ju. Total 8.

- 13 2hf. Dr. G. S. FORBES.—Experimental Electrochemistry.

2 Se. Total 2.

COURSES OF RESEARCH

- 20a. Professor RICHARDS.—Inorganic Chemistry, including Determination of Atomic Weights.

1 Gr. Total 1.

- 20b. Professor C. L. JACKSON.—Organic Chemistry.

4 Gr. Total 4.

- 20c. Professor JACKSON and Asst. Professor TORREY.—Organic Chemistry.

4 Gr., 1 Se., 1 Ju. Total 6.

- 20d. Professor RICHARDS.—Physical Chemistry, including Electrochemistry.

3 Gr. Total 3.

- 20e. Professors SANGER and RICHARDS.—Inorganic and Analytical Chemistry.

2 Gr. Total 2.

- 20f. Asst. Professor BAXTER.—Inorganic Chemistry, including Determination of Atomic Weights.

3 Gr., 1 Se. Total 4.

- 20g. Asst. Professor BAXTER.—Physical Chemistry. Stoichiometry (determination of physico-chemical constants)

1 Gr. Total 1.

Engineering

Primarily for Undergraduates:—

- 1e. Mr. RISLEY and Mr. W. E. MACDONALD.—Trigonometry, Algebra, and Analytic Geometry.

1 Ju., 3 So., 19 Fr., 7 Sp., 1 uC. Total 31.

- 1a 1hf. Mr. RISLEY and Mr. W. E. MACDONALD.—Algebra.

1 Se., 1 Ju., 7 So., 26 Fr. Total 35.

- 1b 1hf. Mr. RISLEY and Mr. W. E. MACDONALD.—Trigonometry.

2 Se., 6 Ju., 4 So., 9 Fr., 3 Sp. Total 24.

- 1d 2hf. Mr. RISLEY and Mr. W. E. MACDONALD.—Analytic Geometry.

1 G.S., 3 Se., 9 So., 24 Fr., 1 Sp., 2 uC. Total 40.

- 1c. Asst. Professor HUNTINGTON, and Messrs. CLEMENTS and SHEPARD.—Differential and Integral Calculus.

1 G.S., 1 Se., 7 Ju., 32 So., 4 Fr., 4 Sp., 5 uC. Total 54.

- 3a. Asst. Professor KENNEDY, and Messrs. A. E. NORTON, NINDE, and CARROLL.—Mechanical Drawing.

1 G.S., 4 Se., 9 Ju., 22 So., 46 Fr., 6 Sp., 1 uC. Total 89.

- 3b ¹/_{hf}. Mr. ASHLEY and Mr. CARROLL. — Descriptive Geometry.
3 G.S., 4 Se., 7 Ju., 26 So., 3 Fr., 1 Sp. Total 44.
- 3d ²/_{hf}. Asst. Professor KENNEDY, and Messrs. A. E. NORTON, NINDE, and CARROLL. — Mechanism. Study of Gearing and Mechanical Movements.
6 G.S., 1 Sc., 7 Ju., 26 So., 2 Fr., 3 Sp., 2 uC. Total 47.
- 4a. Asst. Professor HUGHES, assisted by Mr. PAIGE and Mr. J. C. BARNES (North Georgia Agricultural College). — Plane and Topographical Surveying.
3 G. S., 4 Se., 25 Ju., 48 So., 39 Fr., 10 Sp., 6 uC., 11 S.S. Total 146.
- 10a. Mr. MARKHAM. — Chipping, Filing, and Fitting.
7 Ju., 7 So., 4 Fr., 1 Sp., 1 Sc., 2 S.S. Total 22.
- 10b. Mr. MARKHAM. — Blacksmithing.
7 Ju., 7 So., 4 Fr., 1 Sp., 1 Sc., 2 S.S. Total 22.
- 10c. Mr. MARKHAM. — Pattern-making and Foundry Practice.
5 Ju., 5 So., 4 Fr., 1 Sc., 5 S.S. Total 20.
- 10e. Mr. MARKHAM. — Machine Shop Practice.
5 Ju., 5 So., 4 Fr., 1 Sc., 2 S.S. Total 17.
- 5b ¹/_{hf}. Professor L. J. JOHNSON and Mr. NICHOLS. — Elementary Statics. Graphic and Algebraic Methods.
6 G.S., 3 Se., 12 Ju., 36 So., 2 Fr., 1 Sp., 5 uC. Total 65.
At Harvard Engineering Camp. Mr. H. U. RANSOM.
1 G.S., 1 Ju., 8 So., 1 Fr., 1 Sp., 1 Sc. Total 13.
- 5e ²/_{hf}. Asst. Professor HUNTINGTON, Mr. D. L. WEBSTER, and Mr. G. R. CLEMENTS. — Elementary Kinematics and Kinetics.
1 G.S., 2 Se., 10 Ju., 21 So., 1 Fr., 2 Sp., 1 uC. Total 38.
At Harvard Engineering Camp. Mr. H. U. RANSOM.
3 G.S., 1 Se., 2 Ju., 6 So., 1 Sc., 1 S.S. Total 14.
- 11a ²/_{hf}. Professor HOLLIS, and Messrs. MARKHAM and MACINTIRE. — Steam Machinery (introductory course).
9 G.S., 14 Se., 12 Ju., 26 So., 10 Fr., 2 Sp., 6 uC. Total 79.
- For Undergraduates and Graduates : —*
- 4c ^h/_f. Asst. Professor HUGHES, assisted by Mr. C. F. EBERLY (Assistant Topographer U. S. Geological Survey). — Geodetic Surveying.
1 G.S., 2 Ju., 2 So., 1 S.S. Total 6.
- 4d. Asst. Professor HUGHES, assisted by Mr. PAIGE and Mr. J. C. BARNES (North Georgia Agricultural College). — Railroad Engineering (first course).
3 G. S., 4 Se., 18 Ju., 27 So., 29 Fr., 8 Sp., 3 uC., 4 S.S. Total 96.
- 5a ¹/_{hf}. Professor HOLLIS, Asst. Professor HUNTINGTON, and Mr. D. L. WEBSTER. — Kinetics (second course).
3 G.S., 7 Se., 13 Ju., 1 Sp., 1 Sc. Total 25.
- 5c ²/_{hf}. Professor HOLLIS and Mr. DUVECK. — Elementary Resistance of Materials.
5 G.S., 12 Se., 25 Ju., 1 Sc. Total 43.
At Harvard Engineering Camp. Professor HOLLIS and Mr. H. U. RANSOM.
3 G.S., 1 Se., 2 Ju., 2 So., 1 Sp., 1 Sc., 1 S.S. Total 11.

- 6a^{2hf}. Asst. Professor HUGHES and Mr. PAIGE. — Hydrostatics and Hydraulics.
7 G.S., 6 Se., 20 Ju., 1 Sp., 4 Sc. Total 38.
- 12b^{1hf}. Professor MARKS and Mr. MACINTIRE. — Elements of Thermodynamics.
Theory of Heat Engines.
6 G.S., 8 Se., 27 Ju., 3 So., 2 Sp., 2 Sc. Total 48.
- 13a. Professor MARKS, and Messrs. WOLFARD and MACINTIRE. — Engineering
Laboratory. A course in experimental methods.
1 Gr., 10 G.S., 12 Se., 19 Ju., 2 So., 1 Sp., 5 Sc. Total 50.
- 14a. Asst. Professor KENNEDY and Mr. NINDE. — Machine Design (introductory
course). 2 G.S., 5 Se., 10 Ju., 1 Sp., 1 uC. Total 19.
- 16a. Professor KENNELLY, Messrs. CRANE, DOGGETT, and SPENCER. — Genera-
tion, Transmission, and Utilization of Electrical Energy (elementary
course). 9 G.S., 11 Se., 25 Ju., 3 So., 1 Sp., 5 Sc., 1 Law. Total 55.
- 16c^{1hf}. Professor ADAMS and Mr. TYNG. — Direct-Current Dynamo-Electric
Machinery. 1 Gr., 11 G.S., 3 Se., 1 So. Total 16.
- 16f^{1hf}. Messrs. CRANE and DOGGETT. — Electrical Engineering Instruments and
Measurements. 1 Gr., 7 G.S., 4 Se., 1 So., 2 Sc. Total 15.
- Primarily for Graduates: —*
- 4e². Asst. Professor HUGHES and Mr. PAIGE. — Road Engineering.
5 G.S., 3 Se., 3 Sc. Total 11.
- 4f¹. Asst. Professor HUGHES and Mr. PAIGE. — Railroad Engineering (second
course). Problems in railroad construction, economics, and maintenance.
5 G.S., 7 Se., 1 Ju., 1 So., 1 Sp., 2 Sc. Total 17.
- 5f. Professor L. J. JOHNSON and Mr. NICHOLS. — Mechanics of Structures.
11 G.S., 4 Se., 1 Ju., 3 Sc. Total 19.
- 5g¹. Professor HOLLIS. — Mechanics of Machinery and Boilers.
1 G.S., 2 Sc. Total 3.
- 6c¹. Asst. Professor HUGHES and Mr. PAIGE. — Water Supply and Sanitary
Engineering. 7 G.S., 9 Se., 1 So., 3 Sc. Total 20.
- 6d². Asst. Professor HUGHES, and Messrs. SAFFORD and PAIGE. — Hydraulic
Engineering. River, Harbor, Canal and Irrigation Works.
5 G.S., 5 Se., 1 So., 3 Sc. Total 14.
- 7b. Professor SWAIN, Asst. Professor KILLAM, and Mr. NICHOLS. — Theory and
Design of Structures of Wood, Stone, and Metal.
9 G.S., 5 Se., 1 Ju., 3 Sc. Total 18.
- 8a¹. Asst. Professor KILLAM. — Foundations, Masonry, and Fireproofing.
13 G.S., 11 Se., 1 Ju., 1 So., 3 Sc. Total 29.
- 12a². Professor MARKS and Mr. E. S. PLEASANTON. — Efficiency and Economics
of Heat Engines. 4 G.S., 1 So., 3 Sc. Total 8.
- 13b². Professor MARKS and Mr. E. S. PLEASANTON. — Mechanical Engineering
Laboratory. 3 G.S., 3 Sc. Total 6.
- 14b¹. Professor HOLLIS and Mr. DUVECK. — Machine Design (second course).
3 G.S., 2 Sc. Total 5.

- 16b². Professors KENNELLY and CLIFFORD. — Illumination and Photometry.
1 Gr., 2 G.S., 2 Se., 1 Ju., 1 Sc. Total 7.
- 16d. Professor ADAMS and Mr. TYNG. — Dynamo Design.
1 Gr., 5 G. S., 4 Se., 2 Sc. Total 12.
- 16e². Professor CLIFFORD. — Alternating-Current Machinery.
7 G.S., 1 Se., 2 Sc. Total 10.
- 16g¹. Professor CLIFFORD. — Alternating Currents.
1 Gr., 10 G.S., 5 Se., 1 So., 2 Sc. Total 19.
- 16h². Professor ADAMS and Mr. TYNG. — Alternating-Current Machinery.
5 G.S., 1 Se., 2 Sc. Total 8.
- 17a¹. Professor KENNELLY. — Electric Transmission and Distribution of Power.
1 Gr., 10 G.S., 4 Se., 2 Sc. Total 17.
- 17b². Professor KENNELLY. — Telegraphy and Telephony.
1 Gr., 6 G. S., 4 Se., 2 Sc. Total 13.
- 21². Professors KENNELLY and ADAMS. — Conference on Engineering Subjects.
1 Gr., 6 G. S., 3 Se., 2 Sc. Total 12.
- 22². Professor WYMAN. — Contracts and Specifications. General Principles of
Common Law governing Construction Contracts.
1 Gr., 19 G. S., 1 G.B., 6 Se., 6 Sc. Total 33.

Primarily for Graduates:—

COURSES IN SPECIAL FIELDS

- 20a. Professor ADAMS. — Electrical Engineering Research. 4 G.S. Total 4.
- 20b. Professor CLIFFORD. — Electrical Engineering Research. 2 G.S. Total 2.
- 20c. Professor KENNELLY. — Electrical Engineering Research. 1 G.S. Total 1.
- 20e. Professor SWAIN. — Structures of Wood, Stone, and Metal.
1 G.S. Total 1.
- 20g. Professor HOLLIS. — Machinery and Boilers for Power Stations.
1 Gr., 3 G.S. Total 4.
- 20h. Professor MARKS. — Internal Combustion Motors. 1 G.S. Total 1.
- 20n. Professor MARKS. — Refrigeration. 2 G.S. Total 2.

Forestry

For Undergraduates and Graduates:—

- 3a. Asst. Professor JACK. — Forest Botany. Systematic Study of Local Species
in Autumn Characters. 8 G.S., 1 Se. Total 9.
- 1a. Asst. Professor FISHER. — Silviculture. Silvical Studies. Forest Descrip-
tion and Treatment. 8 G.S., 1 Se. Total 9.
- 4a. Asst. Professor JACK. — Forest Protection. Forest Fires.
8 G.S., 1 Se. Total 9.
2. Mr. MacKAYE. — Forest Measurements. 8 G.S., 1 Se. Total 9.
- 1c. Asst. Professor JACK. — Silviculture. Forest Planting and Nursery Work.
8 G.S., 1 Se. Total 9.

- 7b. Mr. MacKAYE. — Forest Management. Construction of a Complete Working Plan. 8 G.S., 1 Se. Total 9.
- 7c. Asst. Professor FISHER and Mr. MacKAYE. — Forest Management. Operations in the Harvard Forest. 4 G.S., 1 Sp. Total 5.
- 3b. Asst. Professor JACK. — Forest Botany. American Species. 8 G.S., 1 Se. Total 9.
- 1b. Asst. Professor FISHER. — Silviculture. Forest Regions and Forest Influences. 8 G.S., 1 Se. Total 9.
- 4b. Asst. Professor JACK. — Forest Protection. Diseases of Trees, Insects, etc. 4 G.S., 1 Sp. Total 5.
5. Mr. MacKAYE. — Forest Economics. Forest History, Administration, and Laws. 4 G.S., 1 Sp. Total 5.
- 7a. Asst. Professor FISHER and Mr. MacKAYE. — Forest Management. Theory of Forest Regulation and Valuation. 8 G.S., 1 Se. Total 9.
- 6b. Mr. BAILEY. — Lumbering. General Logging and Forest Engineering. 4 G.S., 1 Sp. Total 5.
8. Professor JEFFREY, assisted by Messrs. A. J. EAMES and E. W. SINNOTT. — Wood Structure. Microscopic and Macroscopic Features. (See Botany 10 ¹hf.) 8 G.S., 1 Se. Total 9.
- 6a. Mr. BAILEY. — Lumbering. Snow Logging and Inspection of Mills. 4 G.S., 1 Sp. Total 5.
- 6c. Mr. BAILEY. — Forest Surveying and Timber Estimating. 4 G.S., 1 Sp. Total 5.

Botany

Primarily for Undergraduates: —

- 1 ²hf. Asst. Professor OSTERHOUT, assisted by Messrs. A. F. HEMENWAY, H. G. PERRY, H. P. BARSS, A. T. SPEARE, and others. — Botany (introductory course). 3 Gr., 2 Se., 11 Ju., 27 So., 75 Fr., 8 Sp., 4 uC. Total 130.
- 2 ¹hf. Professor THAXTER, assisted by Messrs. H. P. BARSS and A. T. SPEARE. — Morphology of Plants. 5 Gr., 2 G.S., 4 Se., 11 Ju., 14 So., 2 Fr., 2 Sp., 4 uC. Total 44.

For Undergraduates and Graduates: —

- 3a ¹hf. Professor JEFFREY, assisted by Mr. E. W. SINNOTT. — Morphology of the Lower Vascular Plants, the Lycopods, Equisetales, Ferns, Fossil and Lower Gymnosperms. 4 Gr., 1 G.S., 1 Se., 6 Ju. Total 12.
- 3b ²hf. Professor JEFFREY, assisted by Mr. A. J. EAMES. — Morphology of the Higher Vascular Plants, the Conifers, Gnetales, and Angiosperms. 3 Gr., 1 G.S., 5 Ju., 1 Sp. Total 10.
- 4 ²hf. Professor THAXTER, assisted by Mr. H. P. BARSS. — The Algae, Liverworts, and Mosses. 4 Gr. Total 4.
5. Mr. AMES. — Outlines of Economic Botany. 1 Gr., 1 G.S., 2 Ju., 2 So., 1 Fr., 1 Sp., 1 uC. Total 9.

7. Asst. Professor FERNALD. — Classification and Distribution of Flowering Plants, with special reference to the Flora of New England and the Maritime Provinces. 1 Gr., 1 G.S., 1 Se., 3 Ju., 1 So. Total 7.
- 10 ¹*hf*. Professor JEFFREY, assisted by Messrs. A. J. EAMES and E. W. SINNOTT. — Structure of Woods: microscopic and macroscopic features. (See Forestry 8.) 8 G.S., 1 Se. Total 9.
- 11 ²*hf*. Professor W. E. CASTLE and Asst. Professor EAST. — Variation, Heredity, and the Principles of Animal and Plant Breeding. (See Zoölogy 11 ²*hf*.) 8 Gr., 4 G.S., 1 Ju., 1 So., 1 uC. Total 15.

Primarily for Graduates: —

COURSES OF RESEARCH

- 20a. Professor JEFFREY. — Structure and Development of Vascular Plants. 4 Gr. Total 4.
- 20b. Professors FARLOW and THAXTER. — Structure and Development of Cryptogams. 3 Gr. Total 3.
- 20d. Asst. Professor FERNALD. — Researches in Geographic Botany. 1 Gr., 1 Ju. Total 2.
- 20f. Asst. Professor EAST. — Variation, Heredity, and the Principles of Plant Breeding. 1 Gr., 1 G.S. Total 2.

Zoölogy

Primarily for Undergraduates: —

- 1 ¹*hf*. Professor G. H. PARKER, Mr. DAY, and other assistants. — Zoölogy (elementary course). 6 Gr., 7 Se., 19 Ju., 27 So., 72 Fr., 10 Sp., 8 uC. Total 149.
- 2 ²*hf*. Professor W. E. CASTLE, Messrs. J. DETLEFSEN and MACDOWELL. — Morphology of Animals. 2 Gr., 7 Ju., 13 So., 4 Fr., 2 Sp., 5 uC. Total 33.

For Undergraduates and Graduates: —

3. Asst. Professor H. W. RAND and Mr. BOYDEN. — Comparative Anatomy of Vertebrates. 5 Gr., 2 Se., 6 Ju., 1 So. Total 14.
- 4 ¹*hf*. Asst. Professor H. W. RAND and Mr. MORGULIS. — Microscopical Anatomy. 5 Gr., 1 G.S., 2 Se., 1 So. Total 9.
- 5b ²*hf*. Professor MARK, Asst. Professor H. W. RAND, and Mr. MORGULIS. — Embryology of Vertebrates. Organogeny. 8 Gr., 1 G.S., 1 Se., 1 Ju. Total 11.
- 11 ²*hf*. Professor W. E. CASTLE. — Variation, Heredity, and the Principles of Animal Breeding. 8 Gr., 4 G.S., 1 Ju., 1 So., 1 uC. Total 15.
- 12 ¹*hf*. Professor MARK and Mr. KORNHAUSER. — Cytology, with special reference to Heredity. 2 Gr., 1 G.S. Total 3.

Primarily for Graduates: —

- 7a ²*hf*. Professor WHEELER and Mr. BRUES. — Morphology and Classification of Insects. 2 Gr., 4 G.S., 2 Ju., 1 Sp. Total 9.
- 7b ²*hf*. Professor WHEELER and Mr. BRUES. — Habits and Distribution of Insects. 2 Gr., 2 Ju. Total 4.

- 7c²hf. Mr. BRUES. — Common Economic Insects and Methods of Controlling Them. 1 G.S. Total 1.
- †14a¹hf. Professor G. H. PARKER. — The Structure and Functions of Sense Organs. 11 Gr., 1 G.S., 2 Se., 1 Ju. Total 15.
- 17¹hf. Asst. Professor H. W. RAND. — Experimental Morphology. The Form-determining Factors in Development and Growth. 6 Gr., 1 G.S., 1 So. Total 8.

COURSES OF RESEARCH

- 20a. Professor MARK. — Embryology and Cytology. 8 Gr. Total 8.
- 20c. Professor G. H. PARKER. — The Structural and Functional Basis of Animal Reactions. 4 Gr. Total 4.
- 20e. Asst. Professor H. W. RAND. — Developmental and Growth Processes. Comparative Anatomy of Vertebrates. 2 Gr. Total 2.
- 20d. Professor W. E. CASTLE. — Variation, Heredity, and the Principles of Animal Breeding. 1 Gr., 1 G.S., 1 Se. Total 3.
- 20f. Professor WHEELER. — Economic Entomology. 1 G.S. Total 1.

Geology

GEOLOGY AND GEOGRAPHY

GENERAL GEOLOGY

Primarily for Undergraduates:—

- 4¹hf. Professors DAVIS and WOLFF, and Asst. Professor WOODWORTH, assisted by Mr. W. P. HAYNES. — Introduction to Geology. Dynamical and Structural Geology. 6 Gr., 5 G.S., 11 Se., 14 Ju., 22 So., 11 Fr., 3 Sp., 7 uC. Total 79.
- 5²hf. Asst. Professor WOODWORTH, assisted by Mr. LAHEE. — Introduction to Historical Geology. 2 Gr., 2 G.S., 4 Se., 6 Ju., 9 So., 7 Fr., 1 Sp., 3 uC. Total 34.

For Undergraduates and Graduates:—

- 8¹hf. Asst. Professor WOODWORTH. — Advanced General Geology. 1 Gr., 4 G.S., 4 Se., 3 Ju., 1 So., 1 Fr., 3 Sp., 4 Sc. Total 21.
- 16²hf. Asst. Professor WOODWORTH. — Glacial Geology. 1 Gr., 2 Se., 3 Ju., 3 So., 2 Sp., 1 uC. Total 12.
- 12 (formerly 22). Mr. LAHEE. — Geological Field Work in the Vicinity of Boston. 2 Gr., 1 G.S., 1 Se. Total 4.

Primarily for Graduates:—

- 20c. Professors DAVIS, WOLFF, and H. L. SMYTH, and Asst. Professor WOODWORTH. — Geological Investigation in the Field and Laboratory. 3 Gr., 1 Se. Total 4.

ECONOMIC GEOLOGY

For Undergraduates and Graduates:—

- 18²hf. Professor WOLFF, and Asst. Professors WOODWORTH and PALACHE, assisted by Mr. J. W. EGGLESTON. — Economic Geology of the Non-Metalliferous Substances. 1 Gr., 1 G.S., 3 Se., 1 Ju. Total 6.

Primarily for Graduates :—

20b. Mr. GRATON. — Economic Geology (research course).

1 Gr., 1 G.S., 2 Se. Total 4.

GEOGRAPHY

Primarily for Undergraduates :—

A ¹hf. Asst. Professor D. W. JOHNSON and Mr. W. G. REED. — Physiography (elementary course). 2 Gr., 5 Se., 5 Ju., 11 So., 9 Fr., 1 Sp. Total 33.

For Graduates and Undergraduates :—

9²hf. Asst. Professor D. W. JOHNSON, assisted by Mr. B. M. VARNEY. — Geographic Influences in North America. 2 Se., 2 Ju. Total 4.

7²hf. Professor DAVIS, assisted by Mr. B. M. VARNEY. — Physiography of Europe. 3 Gr., 1 Ju. Total 4.

10²hf. Asst. Professor D. W. JOHNSON. — Geomorphology.

1 G.S., 1 Se., 1 Ju. Total 3.

2¹hf. Asst. Professor WARD. — Geography of South America. 2 Se. Total 2.

Primarily for Graduates :—

20a. Professor DAVIS and Asst. Professor D. W. JOHNSON. — Physiography (research course). 2 Gr. Total 2.

METEOROLOGY AND CLIMATOLOGY

Primarily for Undergraduates :—

B ²hf. Asst. Professor WARD, assisted by Mr. REED. — Meteorology (elementary course). 5 Se., 9 Ju., 9 So., 10 Fr., 2 Sp. Total 35.

For Undergraduates and Graduates :—

1¹hf. Asst. Professor WARD. — Climatology of North America.

1 Gr., 3 Ju., 1 So. Total 5.

2¹hf. Geography of South America. (See above.)

19¹hf. Asst. Professor WARD. — General Climatology.

1 Gr., 1 Se., 1 So. Total 3.

Primarily for Graduates :—

20e. Asst. Professor WARD. — Climatology (research course).

1 Gr., 1 Ju. Total 2.

Mineralogy and Petrography

Primarily for Undergraduates :—

2. Asst. Professor PALACHE, assisted by Mr. ROBERT HARVIE. — Mineralogy (including Crystallography, Physical and Chemical Mineralogy, and Descriptive Mineralogy).

1 Gr., 3 G.S., 2 Se., 12 Ju., 5 Fr., 2 Sp., 3 uC. Total 28.

For Undergraduates and Graduates :—

10¹hf. Asst. Professor PALACHE. — Advanced Mineralogy.

3 Gr., 2 Se., 1 Ju., 1 Sp. Total 7.

12. Professor WOLFF, assisted by Mr. ROBERT HARVIE. — Petrography.

1 Gr., 4 G.S., 3 Se., 2 Ju., 1 So., 2 Sp., 5 Sc. Total 18.

*Primarily for Graduates:—*14 ²hf. Professor WOLFF. — Advanced Petrography.

2 Gr., 2 G. S., 3 Se. Total 7.

COURSE OF RESEARCH

†20. Professor WOLFF and Asst. Professor PALACHE. — Research in Mineralogy, Crystallography, or Petrography.

1 Gr. Total 1.

Mining and Metallurgy

*Primarily for Undergraduates:—*A ¹hf. (formerly 16). Professor PETERS, assisted by Mr. WEEKS.—Introduction to Mining and Metallurgy.

1 G.S., 51 Ju., 39 So., 24 Fr., 2 Sp. Total 117.

B ²hf. (formerly 9). Professors SAUVEUR and PETERS, assisted by Mr. H. M. BOYLSTON and Mr. A. W. STICKNEY. — General Metallurgy.

3 G.S., 2 Se., 12 Ju., 10 So., 7 Fr., 3 Sp., 1 uC. Total 38.

1 ²hf. Professor H. L. SMYTH and Asst. Professor RAYMER, assisted by Mr. W. S. WEEKS. — Elements of Mining. Prospecting and Exploring; Breaking Ground; Hydraulic and Open-pit Mining; Stamp-milling and Ore-concentration. 5 G.S., 4 Se., 15 Ju., 10 So., 7 Fr., 3 Sp., 1 uC. Total 45.

2 (formerly Geology 10). Professor H. L. SMYTH, assisted by Mr. W. S. WEEKS. — Ore-deposits. Origin and occurrence.

1 Gr., 2 G.S., 10 Ju., 1 Fr., 3 Sp. Total 17.

3 ¹hf. (formerly 10). Asst. Professor RAYMER, assisted by Mr. A. W. STICKNEY. — Fire Assaying.

6 G.S., 1 Se., 6 Ju., 1 Fr., 3 Sp. Total 17.

4 ²hf. (formerly 6). Asst. Professor C. H. WHITE, assisted by Mr. R. E. SOMERS. — Metallurgical Chemistry. The Analysis of Ores.

3 G.S., 2 Se., 5 Ju., 1 Fr., 2 Sp. Total 13.

*For Undergraduates and Graduates:—*7¹ (formerly 5). Professor H. L. SMYTH, assisted by Mr. W. S. WEEKS.—Metal and Coal Mining; Exploitation.

2 Gr., 5 G.S., 4 Se., 2 So., 2 Sp., 5 Sc. Total 20.

8 ²hf. (formerly 11). Asst. Professor RAYMER. — Mining Plant.

2 Gr., 3 G.S., 2 Se., 1 Fr., 1 Sp., 5 Sc. Total 14.

10 (formerly 12). Mr. W. S. WEEKS. — Mining. The study of mining operations.

1 Gr., 2 G.S., 2 Se., 5 Ju., 2 Sp., 3 Sc. Total 15.

11 ¹hf. (formerly 2). Professor SAUVEUR, assisted by Mr. H. M. BOYLSTON and Mr. R. E. SOMERS.—Metallurgy of Iron and Steel.

1 Gr., 5 G.S., 9 Se., 6 Ju., 5 So., 1 uC. Total 27.

12 ²hf. (formerly 14). Professor SAUVEUR, assisted by Mr. H. M. BOYLSTON. — Metallography.

2 G.S., 3 Se., 2 So., 1 uC. Total 8.

14 ²hf. (formerly 3). Professor PETERS, assisted by Mr. W. S. WEEKS. — Metallurgy of Copper, Lead, Zinc, and the Minor Metals, and of the Precious Metals in connection with Copper and Lead.

3 G.S., 3 Se., 1 Ju., 1 So., 1 Fr. Total 9.

15 ²hf. Professor PETERS. — Metallurgy of Zinc, Nickel, Tin, Mercury, and the Minor Metals. 1 G.S., 3 Se., 2 So., 1 Sp. Total 7.

17² (formerly 4). Asst. Professor RAYMER. — Ore-dressing, Concentration, and Milling. 2 Gr., 5 G.S., 2 Se., 1 So., 2 Sp., 5 Sc. Total 17.

19 (formerly 7). Asst. Professor C. H. WHITE. — Metallurgical Chemistry (advanced course). 2 Se., 1 So. Total 3.

Primarily for Graduates: —

21¹ (formerly 8). Asst. Professor C. H. WHITE. — Leaching Processes for Gold and Silver Ores. 3 G.S. Total 3.

22 ²hf. (formerly 26). Professor PETERS. — Advanced Course in the Metallurgy of Copper, Lead, and the Minor Metals. 1 G.S., 2 Se., 2 So. Total 5.

23 ²hf. (formerly 27). Professor SAUVEUR. — Iron Blast Furnaces and their Products. 2 G.S., 3 Se., 1 Ju., 2 So., 1 uC. Total 9.

24². Professor H. L. SMYTH. — Mine Examination and Reports. 4 G.S. Total 4.

26¹ (formerly 17). Asst. Professor RAYMER. — Mine Surveying. 3 G.S. Total 3.

28 ¹hf. Mr. LAHEE. — Geological Surveying. 2 G.S., 2 Se., 1 So., 5 Sc. Total 10.

30². THE INSTRUCTORS IN THE DIVISION. — Mining and Metallurgical Projects and Design. 3 G.S. Total 3.

COURSES OF RESEARCH

20a. Professor SAUVEUR, assisted by Mr. BOYLSTON. — Metallurgy and the Physics of Metals. 1 Gr. Total 1.

20b (formerly Geology 20b). Mr. GRATON. — Problems in ore-deposits. 1 Gr., 2 G.S., 1 Se. Total 4.

20c. Professor H. L. SMYTH. — Mining. 1 G.S. Total 1.

Anthropology

Primarily for Undergraduates: —

1. Dr. FARABEE, assisted by Mr. KIDDER. — General Anthropology. 2 Gr., 22 Se., 23 Ju., 29 So., 13 Fr., 7 Sp., 1 uC. Total 97.

For Undergraduates and Graduates: —

5. Asst. Professor DIXON. — American Archaeology and Ethnography. 2 Gr., 2 Se., 9 Ju., 3 So., 2 Sp. Total 18.

4 ²hf. Dr. FARABEE. — Prehistoric European Archaeology and European Ethnography. 1 Gr., 1 Se., 1 So., 1 Sp. Total 4.

7 ²hf. Asst. Professor DIXON. — Ethnography of Oceania. 4 Gr., 3 Se., 2 So., 1 Sp. Total 10.

Primarily for Graduates: —

2 ¹hf. Dr. FARABEE. — Somatology. 1 Gr. Total 1.

†8 ²hf. Asst. Professor DIXON. — American Indian Languages. Discussion and study of selected texts. 1 Gr. Total 1.

COURSES OF RESEARCH

- ‡20a. Asst. Professor DIXON. — American Archaeology and Ethnology. 1 Gr. Total 1.
 ‡20d. Asst. Professor DIXON. — General Ethnology. 1 Gr. Total 1.

Physiology

1. Asst. Professor DARLING, and Drs. PROVANDIE, BACON, HAPGOOD, and JOUETT. — Elementary Anatomy and Physiology. Personal Hygiene. Emergencies.
 1 Gr., 19 Se., 31 Ju., 34 So., 23 Fr., 3 Sp., 5 uC. Total 116.

The meetings of the Faculty were remarkably short and active. The activity concerned chiefly the newly established scheme of studies in Harvard College, and the administration of college instruction offered by college teachers to other teachers or to the public. For Harvard College, the Faculty adopted the report of the Committee on the Choice of Electives: —

RULES FOR THE CHOICE OF ELECTIVES

I. Every student shall take at least six of his courses in some one department, or in one of the recognized fields for distinction. In the latter case four must be in one department. Only two of the six may be courses open to Freshmen or distinctly elementary in character.

II. For purposes of distribution all the courses open to undergraduates shall be divided among the following four general groups. Every student shall distribute at least six of his courses among the three general groups in which his chief work does not lie, and he shall take in each group not less than one course, and not less than three in any two groups. He shall not count for purposes of distribution more than two courses which are also listed in the group in which his main work lies.

The groups and branches are:

1. Language, Literature, Fine Arts, Music.
 - (a) Ancient Languages and Literatures.
 - (b) Modern Languages and Literatures.
 - (c) Fine Arts, Music.
2. Natural Sciences.
 - (a) Physics, Chemistry, Astronomy, Engineering.
 - (b) Biology, Physiology, Geology, Mining.
3. History, Political and Social Sciences.
 - (a) History.
 - (b) Politics, Economics, Sociology, Education, Anthropology.
4. Philosophy and Mathematics.
 - (a) Philosophy.
 - (b) Mathematics.

The Committee was granted authority to arrange the various courses under the different groups and sub-groups by agreement with the departments in which the courses are given.

III. Prescribed work shall not count either for concentration or distribution.

The Committee on the Choice of Electives was instructed in administering these general rules for the choice of electives by candidates for a degree in Harvard College to make exceptions to the rules freely in the case of earnest men who desire to change at a later time the plans made in their Freshman year, and to make liberal allowances for earnest students who show that their courses are well distributed, even though they may not conform exactly to the rules laid down for distribution. In making exceptions to the rules, a man's previous training and outside reading are to be taken into account.

Late in the year, the Faculty established new tests in French and German, by voting with the combined recommendation of the Committee on the Choice of Electives and the departments of those languages that: —

1. Every candidate for a degree shall pass, before admission to the Junior Class, a special oral examination to test his reading knowledge of either French or German.

2. Opportunity to take this examination shall be given (*a*) on entrance to College, (*b*) at the time of the mid-year and final examinations of the Freshman and Sophomore years, (*d*) at such other times — not later than the beginning of the Junior year, — as may be convenient.

3. This examination shall be administered by the Division of Modern Languages, which may call to its assistance members of other Divisions.

4. This examination shall not affect the present requirement of French A or German A.

The Faculty also took some steps towards uniformity of the requirements for the degree with distinction in the several departments, and accepted as subjects, newly combined for the purposes of that degree, (*a*) Philosophy and Economics, (*b*) Mathematics and Education.

The new scheme of college instruction is less radical than it appears, or rather, it is more radical in principle than in its probable effect on the elective studies of the general student body, and is not meant to be violently revolutionary. As a guide and regulator to the student entangled in the elective pamphlet, it is of great value; as an ideal of college education, it is of greater value still. It admits freedom, but not unchartered freedom.

In December, the report of the Committee on Supplementary Instruction was adopted as follows: —

1. That there be a standing committee on supplementary instruction, charged with arranging the courses for each year in consultation with divisions and departments and individual instructors, and in co-operation with other institutions of higher education in or near Boston.

2. That the Faculty recommend that if such supplementary instruction involve a material increase in the amount of work now done by Harvard instructors the Corporation should increase their numbers to a corresponding extent.

3. That the Faculty recommend that if a plan of coöperation be carried a special degree should be instituted by each of the coöperating colleges. The courses offered by any of these colleges may be credited towards this degree; but the degree should be conferred by the college in which the greater part of the student's work has been done. This degree at Harvard (and Radcliffe) should require the same number of courses as the A.B. and S.B., but might well have different conditions of admission (*e. g.*, by certificate or by actual service in teaching) and of residence (*e. g.*, not requiring the full year of residence). The name of this new degree should be considered in conference, but when conferred by Harvard should not be the A.B. or S.B.

Supplementary Instruction includes courses in the Summer School, and whatever courses may be offered by the Faculty outside of the University. It does not include courses at Radcliffe College, which, though taught by Harvard instructors, supervised by a committee of the Harvard Faculty, and warranted equivalent to Harvard courses by the President of Harvard University, belong in a college allied to Harvard University, but not yet a part of it.

In pursuance of these votes, the President announced that the Committee on the Summer School and Supplementary Courses of Instruction should consist of:—

Professor J. H. ROPES
Professor JOSIAH ROYCE
Professor P. H. HANUS
Professor C. H. MOORE

Professor A. B. HART
Professor W. B. MUNRO
Professor W. J. V. OSTERHOUT
Professor H. J. HUGHES

Subsequently, this committee became the Administrative Board of the Department of University Extension, with Professor Ropes as Dean, thus taking a position analogous to that of the other Administrative Boards under the Faculty of Arts and Sciences.

The first important act of the new department resulted in the establishment of the degree, Associate in Arts. The terms of this degree, as finally agreed upon, are as follows:—

The Harvard degree will be conferred on recommendation of the Faculty of Arts and Sciences, acting on report from the Administrative

Board of the Department of University Extension. Neither an entrance examination nor residence at the University will be required for the degree, for the granting of which the following rules have been adopted by the Faculty: —

I. For the degree of A.A. a candidate is required to pass in studies amounting to the same number of courses as is regularly required for the degree of A.B., of which the equivalent of not less than five full courses shall be courses given by officers of instruction of Harvard University or by authority of Harvard University.

II. Of these courses, one shall be taken from each of the following four groups of subjects: —

1. Language, Literature, Fine Arts, Music.
2. Natural Sciences.
3. History, Political and Social Sciences.
4. Philosophy and Mathematics.

III. Not more than five of these courses shall be elementary courses in any one department.

IV. The Administrative Board of the Department of University Extension is directed to present annually to the Committee on Instruction of the Faculty of Arts and Sciences a list of courses, offered by Harvard University and the coöperating institutions, to be approved by the Faculty as acceptable for the degree of A.A.

It is understood that the courses to be specially accepted for this degree will mainly consist of the Courses of the Summer School of Arts and Sciences and the Extension Courses to be offered by the "Commission on Extension Courses," already organized by the following coöperating institutions: —

Harvard University.	Boston University.
Tufts College.	Boston Museum of Fine Arts.
Mass. Inst. of Technology.	Wellesley College.
Boston College.	Simmons College.

By vote of the Administrative Board of the Graduate School of Arts and Sciences, May 31, 1910, men who hold the degree of Associate in Arts from Harvard University are entitled to admission to the Graduate School, and may be admitted to candidacy for the degree of Master of Arts without taking any intervening degree. The conditions of candidacy for A.M. will be determined for a holder of the degree of A.A., as they are for all other students in the Graduate School, in accordance with the circumstances of each individual case. The time required for taking a higher degree depends on the character of the student's previous education and on his competence for advanced work.

It is understood that similar provision will be made for women as Graduate Students in Radcliffe College and as candidates for the Radcliffe degree of A.M.

No teacher in active service can get the degree of A.A. without proving his (or more commonly her) mettle. The degree makes every demand that a special degree for established teachers should make. Meantime, the degree of A.B. is suffered to keep its old significance, which ordinarily includes continuity of residence and real participation in college life.

I cannot close my report without mention of my predecessor as Dean of the Faculty, who was also, some years before, my predecessor as Dean of Harvard College. In 1902 Clement Lawrence Smith resigned his deanship. He was already doomed by a lingering disease, which he was facing bravely. In 1904 he resigned his professorship of Latin, and from that time till July, 1909, he was slowly dying. Those who knew only his quiet and somewhat dry official manner had little conception of the loyalty, the devotion and the perfect integrity of his service; nor can anyone but a younger man who worked under him appreciate the sense of strength and of rest in the certainty that even throughout the sharpest discussion he would remain just and kind.

L. B. R. BRIGGS, *Dean*.

THE COLLEGE

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — I have the honor of submitting to you a report on Harvard College for the academic year 1909-10.

The number of students in the College at the time the lists were compiled for the Catalogue of 1909-10 was two thousand two hundred and sixty-five, divided as follows: —

Seniors	367
Juniors	505
Sophomores	499
Freshmen	664
Total number of Undergraduates	2,035
Special Students	126
Unclassified Students	104
Total	2,265

Compared with the figures at the corresponding time of the preceding year these show a gain of twenty-seven: —

	Gain	Loss
Seniors	19	
Juniors	22	
Sophomores		122
Freshmen	62	
Special Students		58
Unclassified Students	104	
	207	180
Net gain	27	

As for a number of years past, therefore, I have again to report that in numbers the College remains practically stationary.

During the year the following students died: —

Warren Bard, '12,	July 2, 1910.
Thomas Savage Bowles, '12,	August 14, 1910.
Stafford Hammond, Special,	April 10, 1910.
Maurice MacPherson, '13,	May 13, 1910.
George Kneeland Munroe, '10,	April 28, 1910.

Four hundred and fifty-two candidates — thirty in February and four hundred and twenty-two in June — received the degree of Bachelor of Arts in course. Of these two hundred and seventy were registered as Seniors. The registration of the others is shown in the following table: —

On leave of absence all the year	42
On leave of absence first half-year	3
On leave of absence second half-year	20
Graduate Students in Arts and Sciences	8
Graduate Students in Applied Science	5
Registered in the Law School	15
Registered in the Medical School	4
Registered in the Business School	9
Registered in the Junior Class	25
Registered in the Sophomore Class	12
	<u>143</u>
To be designated "as of 1911" in the <i>Quinquennial</i> . . .	39
	<u>182</u>

Forty-seven candidates received the degree of Bachelor of Science. Their registration is indicated in the next table:—

Senior Class	34
Junior Class	2
Sophomore Class	3
	<u>39</u>
Graduate School of Applied Science	1
Medical School	1
Scientific School	1
	<u>42</u>
On leave of absence all the year	2
On leave of absence second half-year	2
On leave of absence first half-year, receiving degree at Mid-	
Years	<u>1</u>
	47

The last two tables show an increase, over the preceding year, of thirty-one candidates for the degree of Bachelor of Arts and of seven for that of Bachelor of Science.

The next two tables show the losses and gains in the three lower classes between November, 1909, and the latter part of October, 1910. (In comparing these tables with the corresponding tables of the report for 1908-09 it should be remembered that the figures for this year were compiled earlier than were those of last.)

	November, 1909	Loss	Gain	November, 1910
Class of 1911 . .	(Juniors) 504	199	69	(Seniors) 374
Class of 1912 . .	(Sophomores) 496	126	113	(Juniors) 480
Class of 1913 . .	(Freshmen) 664	224	73	(Sophomores) 513
		<u>549</u>	<u>255</u>	

Net loss in the three classes between Nov., 1909, and Nov., 1910, 294
(42 less than in 1909).

	Class of 1911	Class of 1912	Class of 1913	Total for three classes
LOSSES				
Left College before the end of the year . .	12	15	39	66
Left College at the end of the year	168	46	14	228
Were "dropped" and left College	4	6	22	32
Entered a lower class	15	31	110	156
Entered a higher class . . . . .	..	28	39	67
Total loss	199	126	224	549
GAINS				
From higher classes	6	19	32	57
From lower classes	33	35	..	68
Newly admitted	30	59	41	130
Total gain	69	113	73	255
Net loss	130	13	151	294
Net gain . . . . .	..	..	..	..

The next table shows the losses and gains in the number of Special Students since December, 1909:—

*In attendance, December, 1909	126
Left College before the end of the year	15
Left College at the end of the year	50
Entered a College class	14
Total loss	79
Reentered College in 1910 as Special Students	47
Newly admitted	23
Total	70
Net loss	56

An examination of this table shows that the object of the Committee on Admission to admit to this category only those who wish to carry on some special kind of work is practically accomplished: it includes only twenty-three "newly admitted."

The Freshman Class in 1910-11 numbers six hundred and seventy-one, nine more than in 1909-10. The number admitted by examination in 1910, however, is ten less than that in 1909:—

* Catalogue figures of 1909-10.

Admitted by examination in 1910	500
Admitted by examination before 1910	33
Admitted from another college	7
*Admitted from a higher class	128
Admitted from the Special Students	2
Admitted from the Unclassified Students	1
Total	<u>671</u>

In the report of last year attention was called to the work of the College Entrance Examination Board. In view of the approaching discussion of the requirements for admission in the Faculty of Arts and Sciences I once more urge the importance for the future of the College, the great desirability, and the advantages of bringing the Harvard definitions into complete conformity with those of the Board, and of accepting, without a reëxamination of the candidates' examination books, the ratings given by the Board's readers. The wide constituency of the Board, the devoted service therein and in its Commissions of men eminent in secondary as well as in college work, its constant watchfulness of standards, and the great care with which its examinations are prepared and criticised, give its judgments a weight and an educational value far exceeding those of any single college, however eminent.

The members of the Administrative Board for 1909-10 were Professors Willson, Parker, Ward, Lyman, Mr. Hart, the Assistant Dean, and the Dean.

During the course of the year one student was expelled for complicity in an attempt to obtain money by false pretences; two were dismissed, one for dishonesty in business transactions, and one for cheating and lying about it; four were required to withdraw for deception in connection with written work; two had their probation closed for the same reason; one was required to withdraw on account of irregularity in attendance; four had their probation closed for the same reason; twenty-two had their probation closed and one was required to withdraw for poor records in studies; five "admitted on trial" failed to maintain a satisfactory record and had their trials closed.

The adoption by the Faculty of the new rules governing the choice of electives marks one of the greatest changes, perhaps the very greatest change, of recent years. To predict their final educational effect is, of course, impossible; but they give good

* Dropped from 1913: by low record, 17; by admission conditions, 50; by both low record and conditions, 19. Readmitted Freshmen: formerly in 1910, 1; formerly in 1911, 11; formerly in 1912, 19; formerly in 1913, 11. Total 128.

promise of correcting the evils developed in an unrestricted elective system. From the "office" point of view two great gains are immediately secured: a closer relation between the individual student and some teacher, and a thoughtful choice of studies. The increase in the Committee of Advisers, so often urged before, results in each member receiving only four new "advisees" each year, a total of but sixteen when the new system is in complete operation, half the number that some advisers have taken each year. It is possible, therefore, for each adviser to establish close, friendly relations with each student in his charge, helpful to both. That the older members of the Faculty, as well as the younger, are serving on this committee is reason for hearty congratulation. Vastly more important, however, is the rule, applied first to the members of the present Freshman Class, that every student must early in his college career think about the studies he elects, and the object of his training. That hereafter every student in Harvard College must thoughtfully, carefully plan his whole course of study with the advice of some member or a committee of the Faculty ranks among the greatest changes for good in the whole history of the College.

The number of scholars winning a position in the First Group for the academic year 1910-11 is forty-five; of these fourteen hold honorary and thirty-one stipendiary scholarships. In 1909-10 thirty-nine students won a position in this group; nineteen held honorary and twenty stipendiary scholarships.

One hundred and thirty-three students in 1910-11 hold scholarships of the Second Group, — seventy-one stipendiary, sixty-two honorary, — as compared with eighty-three stipendiary and seventy-one honorary, in 1909-10.

The report of the Committee on Improving Instruction, made some four years ago, showed clearly the small amount of time given by a very considerable body of students to the regular work of the College: nevertheless, with this small effort, almost all of these were, as are their successors to-day, able to reach the low standard which ensures promotion and freedom from censure, the standard which by implication has been mistakenly denominated "satisfactory." They have "fulfilled the requirements." The Dean's report for 1907-08 called attention to this, and said that in no place where young men are supposed to be seriously engaged in work, save a college, would such a standard both of quality and of quantity be tolerated from youths of equal age, endowment, and advantages. In complete accord with this low

standard of work is, among an even larger body of students, the standard of attendance. A very considerable portion of the time of the Recorder, the Assistant Dean, and the Dean is devoted to interviewing and warning students, in many cases repeatedly, about an irregularity in keeping appointments which in a shop, a factory, or an office would not infrequently on the occasion of the first interview lead to curt dismissal. The point that the analogy between the youth in the factory and him in college is not perfect is true; the one is paid for his services, the other pays for instruction, — or, rather, casually and genially takes from somebody else the money to pay for it; but the imperfection in the analogy in no way militates against the truth that for every youth the years from seventeen to twenty-one are immensely important in the formation of habits and character, — a period, when, if ever, he should learn to be prompt, accurate, and efficient, when slipshod methods of thought and work alike should be tabooed. In a discussion of this subject it should not be forgotten that it is not for studies alone that a young man comes to college: any system that does not leave ample time for thinking (of which the majority of students do far too little), sports, friendships, and those “undergraduate activities” which help so much in the development of the well rounded man, should be condemned; but for all of these and a much higher standard of work there is ample time in the twenty-four hours of the day. The truth is that college students have the lax habit of thinking that college work and engagements should follow, not take precedence of, the pressing engagements of undergraduate activities, the social life of the college and the outside world; and we have the distressing spectacle of vigorous young men who should be enthusiastic for duty maintaining toward their work the school-boy attitude that for some mysterious reason work is to be done and engagements are to be kept only to such an extent as will obviate trouble with “the Office.” The College possesses an abundance of young men, usually, but by no means always, members of undergraduate social organizations, whose attitude toward life, save that their intellectual interest is not usually so keen, is that of a man who, having retired from active employment, is spending his declining years in ease and comfort.

In this matter of attendance the evil is especially great because of the support, partly conscious and partly unconscious, of some teachers and many parents. There are teachers who frankly say that they do not care whether students come to their lectures

or stay away (and when a lecture is simply a repetition of what is already printed in an accessible book the student's objection to attending is justified); such an attitude or such a lecture produces its immediate effect upon the lazy pupil. Those persons who still possess old-fashioned notions of promptness and attention to duty, but are unacquainted with college routine, would view with astonishment the amount of unfavorable criticism — and there are occasions when "unfavorable criticism" is a mild term for it — bestowed upon administrative officers because they will not extend a vacation already more than thirteen weeks in length in order that a youth may have a "little more of Europe," or "a few days' shooting" (with which the opening of the college usually interferes); or grant him leave of absence during term-time to "assist" at "coming-out" teas and balls, to go to New York a few days in advance of the arrival of an uncertain steamer so that "he shall surely be on the dock," or to recover from the strain of the athletic season, writing a play, or taking part in it, an intercollegiate debate, the mid-year examinations (seldom more than six in a period of two and a half weeks), "making" a college publication, — the list may be indefinitely prolonged. In any place other than a college there would be no prolonged arguments; but there, too, there would be no such subjects for argument, for neither the parents nor their son would think of presenting them. In the opinion of many youths all minor surgical operations, the removal of tonsils and adenoids, all dentists' work, the examination of eyes and the fitting of glasses must be done in term-time, that nothing may interfere with vacations, — a situation that would be amusing did not the support of so many parents make it serious. (Those especially whose homes are in New York, Philadelphia, or any other large Eastern city find Boston physicians and surgeons quite incompetent; prosperous Westerners as a rule prefer those of New York.) "I told Bob that I thought he was cutting a little too much," genially observed the father (a college graduate) of one student who was found taking a day off each week to go hunting. "His college life has been just what I wanted it to be," said the father (also a college graduate) of a member of a university athletic team who, after being for a year on the "ragged edge" in both studies and attendance, had at last failed; adding as an afterthought, "of course, I wish that he had won his promotion." These cases are typical.

That they themselves do not believe in such laxness in work or attendance undergraduates give unconscious but overwhelming

proof in the standards which they set candidates for college papers, theatrical and musical performances, athletic teams, and the like. The whole matter may be summed up in the answer of a crew candidate to the question, "What would happen to you in your crew work if you had such a record of attendance?" "I should be fired," was the prompt reply. "I've seen a great light," said another youth who, under censure for a poor record in studies and attendance, had finally been sent away for a third reason and was returning after six months in the office of a business house; "I've been a cog in a machine; there was pressure on both sides; I *had* to work; everybody was working. What you said was absolutely true; if I'd worked two hours a day and gone to my recitations I'd never have been in trouble about my studies."

The establishment of the "Dean's List," the experiment of giving winners of scholarships and candidates for degrees with distinction what is practically freedom in the ordering of their attendance, has still to prove its worth beyond a limited circle. To serious students, especially to those engaged in laboratory work or in courses involving special investigation and to candidates for degrees with distinction in the weeks immediately preceding their final examination, this freedom is of great value. A considerable number of hard-working men maintain most excellent records of attendance throughout the term, and make use of the privileges of the List only before recesses to secure a few additional well-deserved days of rest. For these men the plan is wholly admirable. On the other hand, cases of the abuse of the privileges are not rare; freedom to govern one's own attendance has developed into unbridled "cutting" and has meant the virtual abandonment of regular study for social engagements or some undergraduate or outside activity, to be followed by vigorous cramming before examinations. As a result it has become necessary for the Recorder and the Dean to keep close watch over the records of a number of students on the List, usually candidates for degrees with distinction who, however, have not attained scholarship rank. That the privilege of cutting is uppermost in the minds of a good many students is shown by the increase in the number of inquiries in regard to the List shortly before the various recesses. The experiment, however, should not be abandoned without longer trial, although the argument urged against it at the beginning, that it is unwise to offer as an inducement for good work permission to neglect a part of the preparation deemed advantageous for that work, has not been disproved.

The success of the new degree with distinction does not depend upon the maintenance of the Dean's List. An interesting comparison may be made between the average cutting of scholarship holders who are candidates for degrees with distinction and that of scholarship holders who are not. (See Table IV.)

The following tables give the "unexcused absences" for the year 1909-10; they do not, therefore, include absences for serious "cases of illness" (reports of which are made by the Medical Adviser) or other "unavoidable hindrances," such, for example, as those caused by family affliction; they do include those for minor illnesses (such as would seldom keep a man away from his business), those of students working to pay their way, and those in a small number of cases with extraordinary circumstances known to the Dean, the Assistant Dean, and the Recorder. The office records of attendance are trustworthy, but are not absolutely accurate; much has been done to improve them with the funds available; more can and should be done; in general, failures to record absences occur much more often than does the mistake of marking absent a student who was on hand punctually. The time covered by the tables is about twenty-five and one-half weeks, the working time of the college year after vacations, recesses, and mid-year and final examination periods have been deducted. Of appointments recorded at the Office a student may have, generally speaking, three for each full course he elects. He must elect four courses, he may elect six: roughly speaking, therefore, he must have each week from twelve to eighteen engagements, which are recorded at the Office (in advanced laboratory courses full records are kept at the laboratory only), appointments when he is expected to be in a fixed place at a fixed time. Except for the comparatively few students who elect courses having a session from half-past one till half-past two Saturday afternoons, that afternoon is a half-holiday.

Table I gives the total number of unexcused absences for undergraduates. (Only Seniors, Juniors, and Sophomores may register on the Dean's List or win places there.)

	Number	Number on Dean's List, scholarship holders of Groups 1 and 2, and candidates for degrees with distinction	Number not on Dean's List	Number that did not attend entire year	Number that did attend entire year
Seniors	381	75	306	61	320
Juniors	510	54	456	18	492
Sophomores	500	39	461	31	469
Freshmen	665	....	665	39	626
Unclassified	110	....	110	10	100
Special	128	....	128	17	111
Scientific	14	....	14	1	13
Total	2,308	168	2,140	177	2,131

	Total unexcused absences	Unexcused absences for Dean's List	Unexcused absences for those not on Dean's List	Unexcused absences of those who did not attend entire year	Unexcused absences of those who did attend entire year
Seniors	12,988	3,000	9,988	1,432	11,556
Juniors	17,586	1,799	15,787	466	17,121
Sophomores	17,632	1,399	16,233	900	16,733
Freshmen	21,057	....	21,057	967	20,090
Unclassified	2,578	....	2,578	150	2,428
Special	3,153	....	3,153	309	2,844
Scientific	226	....	226	4	222
Total	75,220	6,198	69,022	4,228	70,994

Table II gives the average of unexcused absences in various categories:—

	Entire class	Of those on Dean's List	Of those not on Dean's List	Of those who attended entire year
Seniors	34.09	40	32.64	36.11
Juniors	34.30	33.31	34.62	34.30
Sophomores	35.22	35.87	35.14	35.68
Freshmen	31.66	....	....	32.09
Unclassified	23.44	....	....	24.28
Special	24.63	....	....	25.62
Scientific	16.14	....	....	17.07
Total	32.59	36.89	32.21	33.31

Table III gives the average number of unexcused absences of each student on the Dean's List of candidates for degrees with distinction: —

	Scholarship holders	Not scholarship holders
Seniors	(24) 40.85	(51) 39.59
Juniors	(23) 40.30	(31) 28.13
Sophomores	(10) 42.90	(29) 33.45

Table IV gives the average number of unexcused absences for winners of scholarships: —

	Candidates for degrees with distinction	Not candidates for degrees with distinction
Seniors	(24) 40.85	(15) 17.73
Juniors	(23) 40.30	(25) 16.84
Sophomores	(10) 42.90	(36) 31.14

Table V gives the unexcused absences of students in the four regular classes, grouped according to the number of "cuts": —

Entire body of students enrolled as	Grouped according to number of unexcused absences, 1909-10								
	1-6	7-15	16-25	26-50	51-100	101	Totals	Not here the entire year	Here the entire year
Seniors	24	55	67	160	72	3	381	61	320
Juniors	19	60	96	239	93	3	510	18	492
Sophomores	29	69	71	230	97	4	500	31	469
Freshmen	51	129	127	244	105	9	665	39	626
Totals	123	313	361	873	367	19	2,056	149	1,907
Deducting those not here the entire year	24	37	31	42	13	2	149		
Record for those here the entire year in four regular classes	99	276	330	831	354	17	1,907		

These tables speak for themselves, showing clearly in a body in many ways extraordinarily healthy an insidious disease against which administrative officers are constantly struggling. The real cure is the awakening of a vital interest in study; but the method of injecting that vigor into the body collegiate has yet to be found. The present, practical cure, except by a very simple, radical means, the use of which meets fierce opposition, is difficult. To allow a definite number of "cuts" produces a sentiment that they must be "taken": in one university these

authorized absences have won the name of "gratuities"; such a system practically preaches not "do your best," but "do as much as you have to." "Cuts" there must be, — there are serious cases of illness and of family affliction, unavoidable hindrances (these, it should be remembered, have not been included in the tables given above), but the total is not great; even with men earning their way the total number necessary except in a few extraordinary cases is small. At present a line is drawn at the "Dean's List," and it is well to give the plan, doubtful as is the wisdom of it in several aspects, a longer trial. But for those students who neither seek nor attain distinction, who are content with mediocrity, regularity in attendance should be strictly enforced; the man who persists in slipshod habits should be sent away. In action to this end the Administrative Board should have the moral support of the members of the Faculty individually. This support, generally, the Board is supposed to have in the rule that "regular attendance at college exercises is required," and it likewise secures vigorous support in the discussion of a hypothetical case. In the specific instance, however, the situation is very different. He is indeed a rare and forlorn youth who, having barely escaped censure for a low record in studies (or, indeed, incurred it), and finding himself after repeated warnings in difficulties on the score of attendance, cannot secure some teacher (or occasionally even a member of a yet higher board) to beg, what his parents demand, that he be given one more chance, the last, "now that he is awake to the situation," a state of being in which, long before, when he was having private interviews in the office, he professed himself. And even after he has had that last chance and failed, his failure apparently in no way discourages him or his parents and friends, graduate and undergraduate, from beginning a campaign for one more last chance. "This is the most unfair thing that was ever done," said one much supported youth after the last campaign had failed. And to the surprised question, "Why, have n't you been warned over and over again?" came the reply, "That's it; I've been warned so many times that warnings have ceased to have any effect." The standard both of work and of attendance should be raised. It may be urged that this is not the way to produce a love for learning; it is not, nor has any way yet been discovered; but much will have been gained for the college when its minimum standard calls for neither a blush nor an apology, a standard which the industrious as well as the lazy will respect.

To a large body of undergraduates, seriously at work, the real strength of the college, little observed by the world, such a raising of the standard would bring no new prescription; their standard is already higher than any that the Faculty would or should fix. The increase is needed for that other companionable body, careless, genial, and generous, but wofully weak in the presence of the routine of daily duty, the doing of which brings neither excitement nor praise.

B. S. HURLBUT, *Dean.*

ATHLETIC SPORTS

TO THE PRESIDENT OF THE UNIVERSITY:—

SIR,—As chairman of the Committee on the Regulation of Athletic Sports, I have the honor of giving you my report for the academic year 1909–10.

The Faculty and graduate members of the Committee were the same as in 1908–09. Two new undergraduate members, Messrs. Fish and Jaques, took the places made vacant by the graduation of Messrs. Burr and Currier; later, in Mr. Fish's absence, Mr. Lanigan was appointed as his successor. The Committee met twelve times. It experienced the usual difficulty in securing a quorum, and the usual lively divergences of opinion with harmony of general feeling and purpose.

In an earlier year, when the suggestion of withdrawal from all intercollegiate winter sports had been considered and rejected, basketball as an intercollegiate sport in Harvard College was abandoned. In March, 1910, the Committee voted that Harvard should withdraw from the Intercollegiate Swimming Association. The Committee has no prejudice against swimming, which has been plausibly defended as the "cleanest" of all sports, but believes that a college without a swimming tank cannot train its men for intercollegiate contests. In this belief, I understand, the students concur with the Committee.

In the four major sports, the college had a reasonable share of success. The football team was defeated by a Yale eleven of remarkable power, which was yet unable to score a touchdown. The baseball team had a disastrous season in more ways than one: severe accidents crippled the outfield and weakened the infield; the supply of available pitchers was small; and, except now and then, the team could not be depended on for strong, or even steady, play throughout the game. The conduct of the players on the field was good. The track team defeated Yale in the closest contest imaginable. The crews lost the races with Cornell, but made a clean sweep at New London. The most notable success in the lesser intercollegiate sports was in lacrosse. Hockey has suffered for want of a covered rink, — a want now met by the new rink in Boston.

Something has been done to spread the interest in athletic sports as exercise. Second and even third teams and crews have had informal games with our neighbors, and scrub teams give many students opportunities in hockey and baseball. Mr. Garcelon has tried to unearth lonely Freshmen, and through physical exercise to strengthen their bodies, clear their minds, and bring them into healthy association with their fellows. He maintains that a systematic effort to interest every Freshman in some out-of-door sport would noticeably better the physical, mental, and moral condition of the whole class.

In January Mr. Garcelon opened to Freshmen, not candidates for any team, a class in general athletics. Only a few persons came, but these found the class profitable. Mr. Garcelon's conception of general athletic instruction, I print in his own words: —

In January the announcement was made that there would be a class for Freshmen, who were not candidates for any team, in general athletics. Seven boys reported and attended that class. I led the class about three days a week in the gymnasium, giving them vaulting, a little tumbling, some bar work, hurdling, high jumping, and running. Following that, they were given ten lessons in sparring by Mr. Foley, and later still, ten lessons in fencing by Mr. Leslabay. The improvement in their work, in their carriage, and in their ability to do things easily was marked.

If this plan were developed and systematized to include instruction in swimming, wrestling, and perhaps out-of-door running, soccer-football, and tennis, I believe it would be a great thing for our students. The course should be mapped out to include both gymnastics and athletics, and should be varied enough to arouse and keep the interest of the students. Naturally, it would follow that some teacher from the Medical School would give lectures on personal hygiene and kindred subjects. I believe the first step toward the accomplishment of this would be to require every Freshman to be examined by the Director of the Gymnasium, and a record made of the examination. That would give us the facts first required. I wish that the proper authorities would impose such a requirement.

In the business office of the Harvard Athletic Association, the Graduate Treasurer has brought order out of what threatened to be chaos. An overwhelming business had been attempted in short time and in closely limited space, with untrained help and hand-to-mouth methods. Every year made things worse. The business office of the Association has been reorganized, and the bookkeeping improved.

The cost of organized athletics is almost scandalous. In spite of large receipts from baseball, and enormous receipts from football, the Association, after moderate payment toward the permanent improvement of Soldier's Field, can barely meet its bills. The almost complete abolition of subscriptions such as once victimized Freshmen is a healthy curtailment of our income; the increased outlay for hospitality to visiting teams is a healthy addition to our expenses; the cost of expert medical aid is a duty cheerfully assumed: but some expenses bear about the same relation to the health and success of our teams that a silver-mounted bridle bears to good horsemanship.

Captains, managers, and coaches incline to throw aside equipment that is highly serviceable and almost new, and to buy at great expense something wholly new and a shade better; they tend to encourage an exaggerated fastidiousness in hotel accommodations, in food, and in clothing; they too often require for themselves and their men such luxuries of the table and of transportation as none but the rich can afford. The days when the players bought their own uniforms and equipment, and paid their own travelling expenses and doctors' bills are gone past returning; shoes and sweaters for players, dinners for coaches and committees, taxicabs for busy men who steal time to help us without remuneration, — these things have become necessary: but shoes and sweaters to wear once or not at all, shoes and sweaters as keepsakes, souvenir photographs, taxicabs as the sole means of getting about, costly dinners with wines and cigars, — all to be paid for out of gate money, — these things belong with that theory of training which furnishes free automobile rides and theatre trips as a relief to the overtaxed nervous system of the university squads. It is things like these that give a handle to the enemy of athletic sports, and pamper or even pauperize strong men.

I have in mind no one coach, no one team, no one year and no one college, — merely the tendency of modern athletics in universities where gate receipts are high. That petting is not essential to victory, may be learned from the athletic history of the George Junior Republic. When an athlete feels that victory hangs on gratuitous automobile rides, or on the substitution of squabs for chicken at the training table, I suspect that he is already beaten. I write this in full recognition of the terrific strain put on some temperaments by a great contest in rowing or in football.

The establishing of advisory committees (formal or informal) in the major sports bids fair to work well. In rowing, its benefits are unquestioned; in football, it has brought marked gains; in baseball, the lack of it has injured our chance of success.

Permanent improvements on Soldier's Field continue, though less rapidly than we could wish. The completion of the Stadium has greatly improved the appearance of the field. A considerable area has been underdrained and filled in.

In my last report I dwelt on those offences against courtesy and fair play which threaten the very life of baseball as a game for gentlemen, — offences which cannot honestly be laid at the door of the professional player, whose game is often cleaner and quieter than that of the college amateur. It is pleasant to note that in 1910 baseball at Harvard was free from conspicuous discourtesy. Yet throughout the country this sport and other sports suffer from low ideals. It is these low ideals that are responsible for the waste of money in enervating luxury to which I have already referred. It is they that give rise to the practices in baseball, scarcely credible among gentlemen, which I discussed last year. It is they also that have made possible the occasional outbreaks, the distrust, and the pathetic diplomacy in the relations of what should be noble rivals, such as Harvard and Yale. All that is needed to lift intercollegiate sport beyond the reach of just attack, and to put it where it belongs in physical, mental and moral education, is simple honesty and common sense.

L. B. R. BRIGGS, *Chairman.*

THE GRADUATE SCHOOL OF ARTS AND SCIENCES

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — As Dean of the Graduate School of Arts and Sciences, I have the honor to submit a report on the School for the academic year 1909-10.

The following tables present in summary form information concerning the number and distribution of the students, recommendations for degrees, and the assignment of fellowships and scholarships.

Table I shows that the number of students registered in the School was four hundred and fifty-two, an increase of twenty-three over the preceding year. Of this number four hundred and thirty-five were resident and seventeen non-resident, of whom fifteen were travelling fellows. Of the resident students three hundred and seventy-six were in attendance during the whole year, of whom two hundred and seventy-nine were doing full work. Of the remaining fifty-nine resident students twenty-eight entered the School after November 1 and thirty withdrew before the end of the year. The School lost one resident member by death, George Kneeland Munroe of New York City, who had completed the requirements for the A.B. in Harvard College and was pursuing studies in history at the time of his death, April 28. A travelling fellow of great promise was also taken from the School, William Bayard Cutting, Jr., A.B. 1900, who had entered upon his studies of government as John Harvard Fellow, and died at Assouan, Egypt, March 10, 1910.

TABLE I. — NUMBER AND CLASSIFICATION OF STUDENTS

	1907-08	1908-09	1909-10
I. Resident Students doing full work in the School for the whole academic year	287	290	279
Resident students not doing full work or not working for the whole year as Resident Students	119	123	156
	—406	—413	—435
Non-Resident Students holding fellowships	17	15	15
Non-Resident Students not holding fellowships	1	1	2
	—18	—16	—17
II. Students whose studies lay chiefly in			
i. Semitic Languages and History	0	0	0
ii. Ancient Languages (Classics and Indic Philology)	24	28	26
iii. Modern Languages (including Comparative Literature)	119	127	117
iv. History and Political Science	85	85	77
v. Philosophy	49	50	59
vi. Education	14	12	23
vii. Fine Arts (including Architecture)	6	6	2
viii. Music	5	3	3
ix. Mathematics	22	23	30
x. Physics	15	18	14
xi. Chemistry	40	34	26
xii. Engineering	2	1	2
xiii. Forestry	1	0	0
xiv. Biology	22	18	29
xv. Geology	6	9	9
xvi. Mining and Metallurgy	3	1	0
xvii. Anthropology	5	5	9
xviii. Medical Sciences	0	4	5
Unclassed Students	6	5	21
	—424	—429	—452
III. First-year Students	241	245	254
Second-year Students	97	104	110
Third-year Students	50	52	53
Fourth-year Students	26	18	24
Students in fifth year or later	10	10	11
	—424	—429	—452
IV. A.B.'s and S.B.'s of Harvard University and of no other institution	112	120	122
A.B.'s and S.B.'s (and holders of similar degrees) of other institutions and also of Harvard University	11	5	6
Students not holding the Harvard degree of A.B. or S.B.	301	304	324
	—424	—429	—452
V. Students holding the Harvard degree of A.M., S.M., Ph.D., or S.D.	95	95	106
Students holding the Harvard degree of A.B. or S.B., but not of A.M., S.M., Ph.D., or S.D.	84	87	86
Students holding no Harvard degree in Arts, Philosophy, or Science	245	247	260
	—424	—429	—452

In Table II similar facts concerning residence and amount of work are set forth for a period of twenty years. Tables III and IV show that the percentage of students in their first and following years and the percentage of students without Harvard degrees remain substantially unchanged as compared with several preceding years.

TABLE II. — NUMBER OF STUDENTS: 1890-1910

	1890-91.	1891-92.	1892-93.	1893-94.	1894-95.	1895-96.	1896-97.	1897-98.	1898-99.	1899-1900.	1900-01.	1901-02.	1902-03.	1903-04.	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.	1909-10.
Resident Students doing full work in the School for the whole academic year	62	108	127	162	161	175	194	171	218	227	226	218	216	289	273	260	281	287	290	279
Resident Students not doing full work or not working for the whole year as Resident Students	55	79	73	86	94	105	96	107	103	99	113	86	94	123	105	133	105	119	123	156
Whole number of Resident Students	117	187	200	248	255	280	290	278	321	326	339	304	310	412	378	393	386	406	413	435
Non-Resident Fellows	11	9	9	10	12	13	14	15	12	13	14	11	15	14	15	16	21	17	15	15
Other Non-Resident Students	4	4	7	1	5	6	2	..	3	2	..	..	..	1	2	..	..	1	1	2
Whole number of Non-Resident Students . . .	15	13	16	11	17	19	16	15	15	15	14	11	15	15	17	16	21	18	16	17
Whole number of students	132	200	216	259	272	299	306	293	336	341	353	315	325	427	395	409	407	424	429	452
Percentage of Resident Students doing full work for whole academic year	53	58	64	65	63	63	67	62	68	70	67	72	70	70	72	66	73	71	70	64

TABLE III. — PERCENTAGE OF STUDENTS IN THEIR FIRST AND FOLLOWING YEARS: 1897-1910

	1897-98.	1898-99.	1899-1900.	1900-01.	1901-02.	1902-03.	1903-04.	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.	1909-10.
	%	%	%	%	%	%	%	%	%	%	%	%	%
First-year Students.	51	55	53	54	50	54	61	60	53	56	57	57	56
Second-year Students	25	21	25	23	26	26	21	24	26	21	23	24	25
Third-year Students	15	13	11	15	12	11	12	11	13	14	12	12	11
Fourth-year Students and Students of longer residence	9	11	11	8	12	9	6	5	8	9	8	7	8

TABLE IV. — PERCENTAGE OF STUDENTS WITHOUT HARVARD DEGREES: 1897-1910

	1897-98.	1898-99.	1899-1900.	1900-01.	1901-02.	1902-03.	1903-04.	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.	1909-10.
	%	%	%	%	%	%	%	%	%	%	%	%	%
Percentage of Students holding no Harvard degree	40	41	44	44	40	46	46	52	52	55	58	58	58
Percentage of Students holding no Harvard first degree in Arts or Sciences	55	55	61	62	56	62	59	65	64	67	71	71	71

Tables V, VI, and VII indicate that the School continues to maintain its national character in the geographical distribution of its students and of the institutions from which they come to Harvard, and this conclusion has been confirmed by a careful comparison, which is too detailed to admit of compact presentation, with the other graduate departments of Harvard University and with the graduate schools of other universities. A gratifying fact in such statistics is the steady increase in the resort to the School on the part of graduates of colleges in the West and South.

TABLE V. — COLLEGES AND UNIVERSITIES REPRESENTED BY FOUR OR MORE GRADUATES IN THE SCHOOL:
1905-06, 1906-07, 1907-08, 1908-09, 1909-10

	1905-06.	1906-07.	1907-08.	1908-09.	1909-10.
Harvard	197	185	182	182	199
Brown	12	10	10	11	14
Ohio Wesleyan	12	8	9	9	10
Michigan	10	8	8	9	8
Amherst	8	7	8	9	8
Columbia	8	7	8	8	8
Boston Univ.	8	7	7	7	8
Yale	7	6	6	6	8
Williams	7	6	6	7	7
Bowdoin	6	5	6	7	7
Cornell Univ.	6	5	6	6	7
Dartmouth	5	5	6	6	7
Haverford	4	5	6	6	7
Chicago	4	5	5	6	6
Columbia	4	5	5	6	6
Dalhousie	4	5	5	5	6
Indiana	4	5	5	5	6
Ohio Wesleyan ...	4	5	5	5	6
Rochester	4	5	4	5	6
Vanderbilt	4	5	4	5	6
Queen's	4	5	4	5	6
Rochester	4	5	4	5	6
Acadia	4	4	4	5	6
Brown	4	4	4	5	5
Chicago	4	4	4	5	5
Ohio Wesleyan ...	4	4	4	4	5
Princeton	4	4	4	4	5
State Univ. of Iowa ..	4	4	4	4	4
Harvard	197	185	182	182	199
Brown	12	10	10	11	14
Ohio Wesleyan	12	8	9	9	10
Michigan	10	8	8	9	8
Amherst	8	7	8	9	8
Columbia	8	7	8	8	8
Boston Univ.	8	7	7	7	8
Yale	7	6	6	6	8
Williams	7	6	6	7	7
Bowdoin	6	5	6	7	7
Cornell Univ.	6	5	6	6	7
Dartmouth	5	5	6	6	7
Haverford	4	5	6	6	7
Chicago	4	5	6	6	7
Columbia	4	5	5	6	6
Dalhousie	4	5	5	6	6
Indiana	4	5	5	5	6
Ohio Wesleyan ...	4	5	5	5	6
Rochester	4	5	4	5	6
Vanderbilt	4	5	4	5	6
Queen's	4	5	4	5	6
Rochester	4	5	4	5	6
Acadia	4	4	4	5	6
Brown	4	4	4	5	5
Chicago	4	4	4	5	5
Ohio Wesleyan ...	4	4	4	4	5
Princeton	4	4	4	4	5
State Univ. of Iowa ..	4	4	4	4	4
Harvard	197	185	182	182	199
Brown	12	10	10	11	14
Ohio Wesleyan	12	8	9	9	10
Michigan	10	8	8	9	8
Amherst	8	7	8	9	8
Columbia	8	7	8	8	8
Boston Univ.	8	7	7	7	8
Yale	7	6	6	6	8
Williams	7	6	6	7	7
Bowdoin	6	5	6	7	7
Cornell Univ.	6	5	6	6	7
Dartmouth	5	5	6	6	7
Haverford	4	5	6	6	7
Chicago	4	5	6	6	7
Columbia	4	5	5	6	6
Dalhousie	4	5	5	6	6
Indiana	4	5	5	5	6
Ohio Wesleyan ...	4	5	5	5	6
Rochester	4	5	4	5	6
Vanderbilt	4	5	4	5	6
Queen's	4	5	4	5	6
Rochester	4	5	4	5	6
Acadia	4	4	4	5	6
Brown	4	4	4	5	5
Chicago	4	4	4	5	5
Ohio Wesleyan ...	4	4	4	4	5
Princeton	4	4	4	4	5
State Univ. of Iowa ..	4	4	4	4	4
Harvard	197	185	182	182	199
Brown	12	10	10	11	14
Ohio Wesleyan	12	8	9	9	10
Michigan	10	8	8	9	8
Amherst	8	7	8	9	8
Columbia	8	7	8	8	8
Boston Univ.	8	7	7	7	8
Yale	7	6	6	6	8
Williams	7	6	6	7	7
Bowdoin	6	5	6	7	7
Cornell Univ.	6	5	6	6	7
Dartmouth	5	5	6	6	7
Haverford	4	5	6	6	7
Chicago	4	5	6	6	7
Columbia	4	5	5	6	6
Dalhousie	4	5	5	6	6
Indiana	4	5	5	5	6
Ohio Wesleyan ...	4	5	5	5	6
Rochester	4	5	4	5	6
Vanderbilt	4	5	4	5	6
Queen's	4	5	4	5	6
Rochester	4	5	4	5	6
Acadia	4	4	4	5	6
Brown	4	4	4	5	5
Chicago	4	4	4	5	5
Ohio Wesleyan ...	4	4	4	4	5
Princeton	4	4	4	4	5
State Univ. of Iowa ..	4	4	4	4	4
Harvard	197	185	182	182	199
Brown	12	10	10	11	14
Ohio Wesleyan	12	8	9	9	10
Michigan	10	8	8	9	8
Amherst	8	7	8	9	8
Columbia	8	7	8	8	8
Boston Univ.	8	7	7	7	8
Yale	7	6	6	6	8
Williams	7	6	6	7	7
Bowdoin	6	5	6	7	7
Cornell Univ.	6	5	6	6	7
Dartmouth	5	5	6	6	7
Haverford	4	5	6	6	7
Chicago	4	5	6	6	7
Columbia	4	5	5	6	6
Dalhousie	4	5	5	6	6
Indiana	4	5	5	5	6
Ohio Wesleyan ...	4	5	5	5	6
Rochester	4	5	4	5	6
Vanderbilt	4	5	4	5	6
Queen's	4	5	4	5	6
Rochester	4	5	4	5	6
Acadia	4	4	4	5	6
Brown	4	4	4	5	5
Chicago	4	4	4	5	5
Ohio Wesleyan ...	4	4	4	4	5
Princeton	4	4	4	4	5
State Univ. of Iowa ..	4	4	4	4	4
Harvard	197	185	182	182	199
Brown	12	10	10	11	14
Ohio Wesleyan	12	8	9	9	10
Michigan	10	8	8	9	8
Amherst	8	7	8	9	8
Columbia	8	7	8	8	8
Boston Univ.	8	7	7	7	8
Yale	7	6	6	6	8
Williams	7	6	6	7	7
Bowdoin	6	5	6	7	7
Cornell Univ.	6	5	6	6	7
Dartmouth	5	5	6	6	7
Haverford	4	5	6	6	7
Chicago	4	5	6	6	7
Columbia	4	5	5	6	6
Dalhousie	4	5	5	6	6
Indiana	4	5	5	5	6
Ohio Wesleyan ...	4	5	5	5	6
Rochester	4	5	4	5	6
Vanderbilt	4	5	4	5	6
Queen's	4	5	4	5	6
Rochester	4	5	4	5	6
Acadia	4	4	4	5	6
Brown	4	4	4	5	5
Chicago	4	4	4	5	5
Ohio Wesleyan ...	4	4	4	4	5
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Amherst	8	7	8	9	8
Columbia	8	7	8	8	8
Boston Univ.	8	7	7	7	8
Yale	7	6	6	6	8
Williams	7	6	6	7	7
Bowdoin	6	5	6	7	7
Cornell Univ.	6	5	6	6	7
Dartmouth	5	5	6	6	7
Haverford	4	5	6	6	7
Chicago	4	5	6	6	7
Columbia	4	5	5	6	6
Dalhousie	4	5	5	6	6
Indiana	4	5	5	5	6
Ohio Wesleyan ...	4	5	5	5	6
Rochester	4	5	4	5	6
Vanderbilt	4	5	4	5	6
Queen's	4	5	4	5	6
Rochester	4	5	4	5	6
Acadia	4	4	4	5	6
Brown	4	4	4	5	5
Chicago	4	4	4	5	5
Ohio Wesleyan ...	4	4	4	4	5
Princeton	4	4	4	4	5
State Univ. of Iowa ..	4	4	4	4	4
Harvard	197	185	182	182	199
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Michigan	10	8	8	9	8
Amherst	8	7	8	9	8
Columbia	8	7	8	8	8
Boston Univ.	8	7	7	7	8
Yale	7	6	6	6	8
Williams	7	6	6	7	7
Bowdoin	6	5	6	7	7
Cornell Univ.	6	5	6	6	7
Dartmouth	5	5	6	6	7
Haverford	4	5	6	6	7
Chicago	4	5	6	6	7
Columbia	4	5	5	6	6
Dalhousie	4	5	5	6	6
Indiana	4	5	5	5	6
Ohio Wesleyan ...	4	5	5	5	6
Rochester	4	5	4	5	6
Vanderbilt	4	5	4	5	6
Queen's	4	5	4	5	6
Rochester	4	5	4	5	6
Acadia	4	4	4	5	6
Brown	4	4	4	5	5
Chicago	4	4	4	5	5
Ohio Wesleyan ...	4	4	4	4	5
Princeton	4	4	4	4	5
State Univ. of Iowa ..	4	4	4	4	4
Harvard	197	185	182	182	199
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Michigan	10	8	8	9	8
Amherst	8	7	8	9	8
Columbia	8	7	8	8	8
Boston Univ.	8	7	7	7	8
Yale	7	6	6	6	8
Williams	7	6	6	7	7
Bowdoin	6	5	6	7	7
Cornell Univ.	6	5	6	6	7
Dartmouth	5	5	6	6	7
Haverford	4	5	6	6	7
Chicago	4	5	6	6	7
Columbia	4	5	5	6	6
Dalhousie	4	5	5	6	6
Indiana	4	5	5	5	6
Ohio Wesleyan ...	4	5	5	5	6
Rochester	4	5	4	5	6
Vanderbilt	4	5	4	5	6
Queen's	4	5	4	5	6
Rochester	4	5	4	5	6
Acadia	4	4	4	5	6
Brown	4	4	4	5	5
Chicago	4	4	4	5	5
Ohio Wesleyan ...	4	4	4	4	5
Princeton	4	4	4	4	5
State Univ. of Iowa ..	4	4	4	4	4
Harvard	197	185	182	182	199
Brown	12	10	10	11	14
Ohio Wesleyan	12	8	9	9	10
Michigan	10	8	8	9	8
Amherst	8	7	8	9	8
Columbia	8	7	8	8	8
Boston Univ.	8	7	7	7	8
Yale	7	6	6	6	8
Williams	7	6	6	7	7
Bowdoin	6	5	6	7	7
Cornell Univ.	6	5	6	6	7
Dartmouth	5	5	6	6	7
Haverford	4	5	6	6	7
Chicago	4	5	6	6	7
Columbia	4	5	5	6	6
Dalhousie	4	5	5	6	6
Indiana	4	5	5	5	6
Ohio Wesleyan ...	4	5	5	5	6
Rochester	4	5	4	5	6
Vanderbilt	4	5	4	5	6
Queen's	4	5	4	5	6
Rochester	4	5	4	5	6
Acadia	4	4	4	5	6
Brown	4	4	4	5	5
Chicago	4	4	4	5	5
Ohio Wesleyan ...	4	4	4	4	5
Princeton	4	4	4	4	5
State Univ. of Iowa ..	4	4	4	4	4
Harvard	197	185	182	182	199
Brown	12	10	10	11	14
Ohio Wesleyan	12	8	9	9	10
Michigan	10	8	8	9	8
Amherst	8	7	8	9	8
Columbia	8	7	8	8	8
Boston Univ.	8	7	7	7	8
Yale	7	6	6	6</	

Total Membership, 409

TABLE VI. — STUDENTS FROM HARVARD AND TWENTY-FOUR OTHER COLLEGES: 1895-96 — 1909-10

	1895-96.	1896-97.	1897-98.	1898-99.	1899-1900.	1900-01.	1901-02.	1902-03.	1903-04.	1904-05.	1905-06.	1906-07.	1907-08.	1908-09.	1909-10.	Total.
Harvard	178	174	178	196	191	197	189	174	232	192	197	185	182	182	199	2846
Amherst	7	7	5	5	7	10	8	10	14	8	8	7	10	9	14	129
Brown	6	5	7	8	5	11	8	11	12	7	12	4	8	9	6	119
Dartmouth	3	6	6	2	3	6	5	7	12	9	6	10	8	9	10	102
Yale	4	2	4	10	4	7	4	6	9	7	8	7	6	5	7	90
Michigan	2	4	3	4	7	7	2	7	10	5	10	6	9	7	6	89
Bowdoin	7	4	3	6	4	9	8	7	7	5	3	5	6	8	7	89
California	6	7	6	8	8	7	7	6	4	3	3	5	6	4	5	85
Ohio Wesleyan	2	1	4	2	2	3	5	5	8	14	12	4	5	3	4	74
Kansas	8	8	8	5	4	5	2	3	3	2	3	5	3	4	7	70
Haverford	2	2	3	5	5	4	4	5	7	5	5	5	3	6	8	69
Williams	2	2	—	2	4	6	3	4	7	7	7	3	7	6	8	68
Toronto	1	1	5	6	5	6	6	3	4	5	3	8	4	5	2	64
Wesleyan (Conn.)	8	8	5	3	5	5	3	3	4	2	3	3	3	4	2	61
Boston Univ.	2	1	2	3	4	6	1	1	5	5	7	8	6	5	3	59
Tufts	4	5	2	6	5	5	4	6	6	3	1	2	—	4	5	58
Indiana	2	6	4	5	4	2	3	3	2	3	4	5	5	3	6	57
Leland Stanford Jr.	2	4	4	7	6	2	3	6	4	5	3	3	4	1	1	55
Oberlin	2	7	5	3	6	9	4	1	—	1	3	3	3	4	4	55
Columbia	3	2	3	1	—	1	1	6	5	1	4	7	5	11	5	55
Northwestern	1	2	5	6	6	5	1	6	2	2	1	1	2	6	6	52
Chicago	—	1	3	2	2	3	3	7	1	3	4	4	4	5	8	50
Princeton	1	3	5	1	2	3	4	3	2	—	3	4	4	7	8	50
Texas	2	2	2	1	3	3	3	5	5	3	1	2	6	5	6	49
Dalhousie	3	2	2	3	4	4	5	2	2	2	4	2	3	3	3	44
Total Membership	299	306	293	336	341	353	315	325	427	395	409	407	424	429	452	

TABLE VII. — BIRTHPLACES OF GRADUATE STUDENTS: 1907-10

	1907-08	1908-09	1909-10
Students born in the New England States	131	129	132
Students born in other Northern States east of the Mississippi River	149	166	160
Students born in Southern States east of the Mississippi River	31	17	37
Students born in States west of the Mississippi River	59	58	61
Students born in the Dominion of Canada	26	27	27
Students born in other foreign countries	28	32	35
Total number of students	424	429	452
Percentage of students born in New England	31	30	29
Percentage of students born elsewhere	69	70	71

More fundamental than any matter of numbers is, of course, the question of quality. In these days it is not infrequently said that American graduate schools are not attracting the ablest and most ambitious men in the colleges, and that the prevalent type of graduate student is apt to be docile, limited in outlook, and lacking in intellectual initiative. These statements, if true,

deserve very serious attention, for the graduate student of to-day is the professor and investigator of to-morrow, and the future of productive scholarship in America, as well as the quality of college and university teaching, rests mainly with our graduate schools. These must take the material which comes to them, and the quality of this material depends primarily upon the success of the colleges in arousing enthusiasm for scholarship among their students, and of college and university authorities in creating, through the academic career, sufficient opportunity for those who have thus been moved to give their lives to learning. Whether as a matter of fact the level of ability in our graduate schools is unduly low, must be largely a question of opinion, — indeed complaints of the same kind are heard from the professional schools and are not unknown in European universities, — yet some light may be thrown upon the problem by statistical investigation. With respect to Harvard University, it has been conclusively shown that the men who have distinguished themselves in college are in general those who attain distinction in the Law School and the Medical School, and it should be possible to determine whether the Graduate School of Arts and Sciences secures its fair share of the men whose ability and intellectual promise have thus been demonstrated in college. Table VIII shows for a period of ten years the number and distribution of the Bachelors of Arts of Harvard College who have entered the various graduate schools of the University the year following graduation.¹ These figures are interesting from many points of view, but I wish to call attention merely to their bearing on the quality of the Harvard men who come into the Graduate School of Arts and Sciences. In general it appears that, while the percentage of men who go on with their studies increases from twenty-nine in the case of the plain A.B.'s to sixty-two in the case of those taking the degree *summa cum laude*, the proportion of these who enter the Graduate School also shows a marked increase as we go up in the scale of distinction. Thus, while of the total number of A.B.'s returning to the University the year after graduation only twenty-four per cent (349 out of

¹ Small discrepancies in the totals since 1908 are explained by the registrations in the Graduate School of Business Administration, which cover too short a period for inclusion in the general table. In 1908 there registered in this School six graduates with a plain A.B. and one with A.B. *magna cum laude*; in 1909 seven students with a plain A.B. and two with A.B. *magna cum laude*; in 1910 nine students with a plain A.B. and three with A.B. *cum laude*.

Although the Lawrence Scientific School was not a graduate school, the registrations in the Lawrence Scientific School and in the Graduate School of Applied Science are for convenience placed in a single series.

TABLE VIII. — DISTRIBUTION OF HARVARD A.B.'s ENTERING THE SEVERAL GRADUATE SCHOOLS, 1901-10

	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	Totals 1901-10	Percent- ages
Total number of A.B.'s	457	422	486	459	427	374	448	379	427	439	4318	100 ..
Total number of A.B.'s entering the Graduate Schools the year after graduation	148	147	204	150	146	113	162	124	127	140	1461	34 ..
A.B.'s without distinction	308	276	317	289	299	258	287	283	311	330	2958	100 ..
Number returning next year . . .	82	72	124	74	98	66	93	187	182	192	1870	29 1100
Grad. Sch. of Arts and Sciences .	21	11	32	13	21	6	8	10	14	14	150	.. 17
Law School	42	42	69	47	56	41	58	48	46	45	494	.. 57
L. S. S. and Sch. of Applied Sci.	11	4	5	4	5	6	9	8	9	10	71	.. 8
Medical School	8	15	17	9	16	13	18	15	4	14	129	.. 15
Divinity School	0	0	1	1	0	0	0	0	2	0	4	.. .4
A.B.'s <i>cum laude</i>	78	78	103	101	73	70	96	68	88	89	844	100 ..
Number returning next year . . .	30	35	49	42	26	27	34	25	30	137	1335	40 1100
Grad. Sch. of Arts and Sciences .	8	6	10	11	6	5	4	9	6	11	76	.. 23
Law School	14	17	26	21	15	10	22	9	19	17	170	.. 50
L. S. S. and Sch. of Applied Sci.	2	3	4	5	3	10	5	4	5	5	46	.. 14
Medical School	6	7	9	4	2	2	3	2	0	1	36	.. 11
Divinity School	0	2	0	1	0	0	0	1	0	0	4	.. 1
A.B.'s <i>magna cum laude</i>	64	60	55	58	48	36	54	25	25	14	439	100 ..
Number returning next year . . .	31	33	21	28	20	15	30	19	113	8	1208	47 1100
Grad. Sch. of Arts and Sciences .	10	11	8	7	13	9	15	5	6	5	89	.. 43
Law School	16	15	11	18	3	4	8	2	5	3	85	.. 41
L. S. S. and Sch. of Applied Sci.	0	1	1	1	4	2	4	1	0	0	14	.. 7
Medical School	4	5	0	2	0	0	2	0	0	0	13	.. 6
Divinity School	1	1	1	0	0	0	1	0	0	0	4	.. 2
A.B.'s <i>summa cum laude</i>	7	8	11	11	7	10	11	3	3	6	77	100 ..
Number returning next year . . .	5	7	10	6	2	5	5	3	2	3	48	62 100
Grad. Sch. of Arts and Sciences .	2	5	9	4	1	4	3	3	1	2	34	.. 71
Law School	3	0	1	2	1	1	1	0	0	1	10	.. 21
L. S. S. and Sch. of Applied Sci.	0	0	0	0	0	0	1	0	1	0	2	.. 4
Medical School	0	1	0	0	0	0	0	0	0	0	1	.. 2
Divinity School	0	1	0	0	0	0	0	0	0	0	1	.. 2
Total A.B.'s with distinction	149	146	169	170	128	116	161	96	116	109	1360	100 ..
Number returning next year . . .	66	75	80	76	48	47	69	137	145	148	1591	36 1100
Grad. Sch. of Arts and Sciences .	20	22	27	22	20	18	22	17	13	18	199	.. 34
Law School	33	32	38	41	19	15	31	11	24	21	265	.. 45
L. S. S. and Sch. of Applied Sci.	2	4	5	6	7	12	10	5	6	5	62	.. 10
Medical School	10	13	9	6	2	2	5	2	0	1	50	.. 8
Divinity School	1	4	1	1	0	0	1	1	0	0	9	.. 2

1,461) enter the Graduate School of Arts and Sciences, fifty-seven per cent of these (199) are honor men. As against seventeen per cent of the plain A.B.'s, one-third of all the honor men who go on enter the Graduate School of Arts and Sciences, and this proportion increases with the grade of distinction achieved. Thus while but twenty-three per cent of the A.B.'s *cum laude* returning to the University the year after graduation enter the Graduate School, the percentage of those *magna cum laude* is forty-two and of those *summa cum laude* seventy-one. Moreover, the proportion of men of distinction who enter the Graduate School has shown a tendency to increase rather than to diminish since Harvard College has ceased to confer the higher grades of distinction on the basis of marks in unrelated courses. Thus from 1901 to 1907, when the degree *cum laude* was conferred simply upon grades in courses and the degree *magna cum laude* and *summa cum laude* was granted either for grades in courses or for excellence in special subjects, thirty-two and seven-tenths per cent of the honor men returning entered the Graduate School, while for the past three years, when the *magna cum laude* and the *summa cum laude* have been conferred only for excellence in a subject or in related subjects, the percentage of honor men has risen to thirty-seven; and for the two higher forms of distinction the combined percentage has arisen from forty-six in 1901-07 to fifty-six in 1908-10. As a statistical study made while the two systems of awarding distinction were in operation showed that the men who distinguished themselves in special subjects in college had the better chance of attaining eminence in later life,¹ it would seem that the Graduate School is attracting a fair proportion of the men of promise in Harvard College.

TABLE IX. — RECOMMENDATIONS FOR DEGREES IN 1908-10

	1908	1909	1910
I. Graduate students recommended for A.M.	115	109	130
Graduate students recommended for S.M.	4	3	4
Graduate students recommended for Ph.D.	41	38	34
	—160	—150	—168
II. Professional students recommended for A.M. on special courses of study	8	5	13
Professional students recommended for Ph.D. on special courses of study	2 10	- 5	3 16
	—	—	—
Total number recommended for A.M., S.M., and Ph.D.	170	155	184
III. Harvard Bachelors of Arts or Science, not previously grad- uated elsewhere	52	38	50
Harvard Bachelors of Arts or Science, previously grad- uated elsewhere	5	2	1
Students not Harvard Bachelors of Arts or Science	113	115	133
	—170	—155	—184

¹ Lowell, "College Rank and Distinction in Life," *Atlantic Monthly*, October, 1903.

TABLE X. — DIVISIONS AND DEPARTMENTS IN WHICH RECOMMENDATIONS FOR THE HIGHER DEGREES WERE MADE IN 1910

Division	Department	Degrees		Ph.D.
		A.M.	S.M.	
I. Semitic Languages and History		-	-	-
II. Ancient Languages:				
Indic Philology		-	-	-
The Classics (Greek, Latin)		11	-	-
Total in Ancient Languages		-11	- -	- -
III. Modern Languages:				
English		21	-	9
Germanic Languages and Literatures		6	-	1
French, and other Romance Languages and Literatures		5	-	1
Comparative Literature		-	-	3
In more than one Department		9	-	-
Total in Modern Languages		-41	- -	-14
IV. History and Political Science:				
History and Government		19	-	3
Political Economy		5	-	1
Total in History and Political Science		-24	- -	- 4
V. Philosophy		18	-	8
VI. Education		5	-	1
VII. The Fine Arts:				
History and Principles of the Fine Arts		-	-	-
Architecture		-	-	-
Total in the Fine Arts		- -	- -	- -
VIII. Music		-	-	-
IX. Mathematics		6	-	2
X. Physics		4	-	-
XI. Chemistry		4	3	2
XII. Engineering		-	1	-
XIV. Biology:				
Botany		3	-	-
Zoölogy		7	-	2
Total in Biology		-10	- -	- 2
XV. Geology:				
Geology and Geography		2	-	-
Mineralogy and Petrography		1	-	-
Total in Geology		- 3	- -	- -
XVII. Anthropology		-	-	-
XVIII. Medical Sciences		1	-	1
Undivisional		3	-	-
Professional Students:				
Divinity School		11	-	3
Law School		2	-	-
Medical School		-	-	-
Total		-143	- 4	-37

Tables IX and X set forth the number of candidates recommended for higher degrees and their distribution throughout the various Divisions and Departments.

On the recommendation of the Administrative Board, two changes of importance were made last year with reference to the degrees conferred in the School. The degree of Master of Science was abandoned as no longer serving any purpose not adequately provided for by the degree of Master of Arts; and the degree of Doctor of Science, which had come to differ from that of Doctor of Philosophy only in certain unimportant technicalities, was discontinued in the Graduate School of Arts and Sciences, but will be given, under conditions similar to those of the Doctor of Philosophy, in the Graduate School of Applied Science. The relation of the Graduate School of Arts and Sciences to the various professional schools was further simplified by a vote of the governing boards which put an end to the practice of conferring the degree of Master of Arts on the basis of purely professional work. Studies pursued in a professional school may still be accepted as constituents of the scheme of duty offered for the degree, but they must be taken as part of a consistent plan of study and under the general direction of the Graduate School of Arts and Sciences. The disappearance of the A.M. as a "consolation degree" for professional students closes the last of the indirect routes to this degree and leaves it at Harvard, what in the general practice of American universities it has come to be, solely a degree for higher study in arts and sciences.

The degree of Doctor of Philosophy was conferred upon the thirty-seven men named below.

HENRY ADAMS BELLOWS, A.B. 1906.

Subject, Philology. *Special Field*, Comparative Literature. *Thesis*, "The Relations between Prose and Metrical Composition in Old Norse Literature." Assistant Professor of Rhetoric, University of Minnesota.

FRANK EGBERT BRYANT, LITT.B. (*Univ. of Michigan*) 1899, A.M. (*ibid.*) 1901.

Subject, Philology. *Special Field*, English Philology. *Thesis*, "Chapters toward a History of Early English Popular Balladry." Died Oct. 20, 1910. (Associate Professor of English, University of Kansas.)

OSCAR JAMES CAMPBELL, JR., A.B. 1903, A.M. 1907.

Subject, Philology. *Special Field*, Comparative Literature. *Thesis*, "The Comedies of Holberg: A Study in Comparative Literature." Frederick Sheldon Fellow, continuing his studies at Copenhagen.

HAROLD CANNING CHAPIN, A.B. 1904, A.M. 1905.

Subject, Chemistry. *Special Field*, Inorganic Chemistry. *Thesis*, "A Revision of the Atomic Weight of Neodymium." Assistant in Chemistry, Rensselaer Polytechnic Institute, Troy, N. Y.

LAWRENCE WOOSTER COLE, A.B. (*Univ. of Oklahoma*) 1899, A.M. (*Harvard Univ.*) 1904.

Subject, Philosophy. *Special Field*, Comparative Psychology. *Thesis*, "An Experimental Study of Raccoons." Professor of Psychology and Education, University of Colorado.

MELVIN THOMAS COPELAND, A.B. (*Bowdoin Coll.*) 1906, A.M. (*Harvard Univ.*) 1907.

Subject, Economics. *Special Field*, Economic History. *Thesis*, "The Organization of the Cotton Manufacturing Industry in the United States." Frederick Sheldon Fellow, continuing his studies in Europe.

HERBERT ELLSWORTH CORY, A.B. (*Brown Univ.*) 1906.

Subject, Philology. *Special Field*, English Philology. *Thesis*, "The Influence of Spenser on English Poetry." Instructor in English Literature, University of California.

GEORGE CLARKE COX, A.B. (*Kenyon Coll.*) 1886, A.M. (*ibid.*) 1900, A.M. (*Harvard Univ.*) 1908.

Subject, Philosophy. *Special Field*, Epistemology. *Thesis*, "The Philosophy of Richard Avenarius." Assistant in Philosophy, Harvard University.

EZRA BRECKENRIDGE CROOKS, A.B. (*Central Coll.*) 1899, A.M. (*Vanderbilt Univ.*) 1901, S.T.B. (*Harvard Univ.*) 1908, A.M. (*ibid.*) 1909.

Subject, Philosophy. *Special Field*, Philosophy of Religion. *Thesis*, "Religion as Experience." Pastor, Congregational Church, Ayer, and Assistant in Philosophy, Harvard University.

HENRY WADSWORTH LONGFELLOW DANA, A.B. 1903, A.M. 1904.

Subject, Philology. *Special Field*, Comparative Literature. *Thesis*, "Mediaeval Visions of the Other World." Fellow of the Ministry of Public Instruction of the French Republic, at Paris.

CALVIN OLIN DAVIS, A.B. (*Univ. of Michigan*) 1895, A.M. (*ibid.*) 1904.

Subject, Education. *Special Field*, Secondary Education. *Thesis*, "Public Secondary Education in Michigan: Its History and Contemporary Tendencies." Assistant Professor of Education and Inspector of High Schools, University of Michigan.

GEORGE BURWELL DUTTON, A.B. (*Williams Coll.*) 1907, A.M. (*Harvard Univ.*) 1908.

Subject, Philology. *Special Field*, English Philology. *Thesis*, "Thomas Rymer and Aristotelian Formalism in English Literary Criticism, 1650-1700." Instructor in English, Williams College.

GRIFFITH CONRAD EVANS, A.B. 1907, A.M. 1908.

Subject, Mathematics. *Special Field*, Analysis. *Thesis*, "Volterra's Integral Equation of the Second Kind with Discontinuous Kernel." Frederick Sheldon Fellow, continuing his studies in Europe.

MELVIN EVERETT HAGGERTY, A.B. (*Indiana Univ.*) 1902, A.M. (*ibid.*) 1907, A.M. (*Harvard Univ.*) 1909.

Subject, Philosophy. *Special Field*, Psychology. *Thesis*, "An Experimental Study of the Imitative Tendency in Monkeys." Assistant Professor of Psychology and Director of the Psychological Laboratory, Indiana University.

FRANK LAUREN HITCHCOCK, A.B. 1896.

Subject, Mathematics. *Special Field*, Mechanics and Mathematical Physics. *Thesis*, "Vector Functions of a Point." Instructor in Mathematics, Massachusetts Institute of Technology.

ROY GRAHAM HOSKINS, A.B. (*Univ. of Kansas*) 1905, A.M. (*ibid.*) 1906.

Subject, Medical Sciences. *Special Field*, Physiology. *Thesis*, "Interrelations of the Organs of Internal Secretion." Professor of Physiology, Starling-Ohio Medical College, Columbus, O.

PERCY HAZEN HOUSTON, A.B. (*Williams Coll.*) 1903, A.M. (*ibid.*) 1904, A.M. (*Harvard Univ.*) 1905.

Subject, Philology. *Special Field*, English Philology. *Thesis*, "Dr. Johnson as a Literary Critic." Parker Fellow, continuing his studies in England.

WILLIAM HAMMETT HUNTER, A.B. 1904, A.M. 1905.

Subject, Chemistry. *Special Field*, Organic Chemistry. *Thesis*, "The Action of Alkali Iodides on Bromanil and the Red and White Silver Salts of some Bromphenols." Instructor in Chemistry, University of Minnesota.

- EDMUND JACOBSON, S.B. (*Northwestern Univ.*) 1908, A.M. (*Harvard Univ.*) 1909.
Subject, Philosophy. *Special Field*, Psychology. *Thesis*, "Inhibition." Continuing his studies at Cornell University.
- THEODORE FRANCIS JONES, A.B. 1906.
Subject, History. *Special Field*, History of Italy. *Thesis*, "Venice and the Porte, 1520-1542." Instructor in History, New York University.
- GEORGE FREDERICK KENNGOTT, A.B. (*Amherst Coll.*) 1886, Gr., *Andover Theol. Seminary*, 1889, S.T.B. (*ibid.*) 1900, A.M. (*Amherst Coll.*) 1900.
Subject, Philosophy. *Special Field*, Social Ethics. *Thesis*, "The Lowell Social Survey." Pastor, First Trinitarian Congregational Church, Lowell.
- CLARENCE IRVING LEWIS, A.B. 1906.
Subject, Philosophy. *Special Field*, Epistemology. *Thesis*, "The Place of Intuition in Knowledge." Assistant in Philosophy, Harvard University.
- ROBERT HOWARD LORD, A.B. 1906, A.M. 1907.
Subject, History. *Special Field*, History of the Eighteenth Century. *Thesis*, "Austrian Policy and the Second Partition of Poland." Instructor in History, Harvard University.
- HENRY CLAY MCCOMAS, JR., A.B. (*Johns Hopkins Univ.*) 1897, A.M. (*Columbia Univ.*) 1898.
Subject, Philosophy. *Special Field*, Psychology. *Thesis*, "Types of Attention." Demonstrator in Psychology, Princeton University.
- BRUCE MCCULLY, A.B. (*Hiram Coll.*) 1899, A.M. (*Univ. of Chicago*) 1901.
Subject, Philology. *Special Field*, English Philology. *Thesis*, "Chivalry and Romance in Fourteenth Century England." Professor of English, State College of Washington.
- WILLIAM ROY MACKENZIE, A.B. (*Dalhousie Univ.*) 1902, A.M. (*ibid.*) 1903, A.M. (*Harvard Univ.*) 1904.
Subject, Philology. *Special Field*, English Philology. *Thesis*, "The English Moralities from the Point of View of Allegory." Assistant Professor of English, Washington University.
- TROWARD HARVEY MARSHALL, Gr., *Colgate Theol. Seminary*, 1906, A.B. (*McMaster Univ.*) 1908.
Subject, Philosophy. *Special Field*, Philosophy of Religion. *Thesis*, "A Study of the Origins of Hegel's Philosophy of Religion." Minister, First Unitarian Church, Dayton, O.
- ROBERT GRANT MARTIN, A.B. (*Brown Univ.*) 1904, A.M. (*Harvard Univ.*) 1905.
Subject, Philology. *Special Field*, English Philology. *Thesis*, "A Study of the Technical Development of Thomas Heywood." Frederick Sheldon Fellow, continuing his studies at London.
- ARTHUR MITCHELL, A.B. (*Yale Univ.*) 1894.
Subject, Philosophy. *Special Field*, Epistemology. *Thesis*, "Freedom and Intuition in Henri Bergson's Philosophy." Assistant in Philosophy, Harvard University.
- SERGIUS MORGULIS, A.M. (*Columbia Univ.*) 1907.
Subject, Biology. *Special Field*, Zoölogy. *Thesis*, "Studies of Inanition in its Bearing upon the Problems of Growth." Parker Fellow, continuing his studies in Europe.
- RAY WALDRON PETTENGILL, A.B. (*Bowdoin Coll.*) 1905, A.M. (*Harvard Univ.*) 1909.
Subject, Philology. *Special Field*, Germanic Philology. *Thesis*, "The Apollonius von Tyrland of Heinrich von Neuenstadt: A Study of the Sources." Instructor in German, Harvard University.
- GEORGE EDWIN PORTER, A.B. (*Univ. of Toronto*) 1901, S.T.B. (*Yale Univ.*) 1904, A.M. (*Harvard Univ.*) 1908.
Subject, Philology. *Special Field*, English Philology. *Thesis*, "Schiller and Coleridge: A Study in Parallel Development." Acting Professor of English Literature, Amherst College.

SIDNEY SWAIM ROBINS, A.B. (*Univ. of No. Carolina*) 1904, A.M. (*Harvard Univ.*) 1905, S.T.B. (*ibid.*) 1908.

Subject, Philosophy. *Special Field*, History of Philosophy. *Thesis*, "Hegel's Pragmatism." Pastor, Unitarian Church, Kingston.

ABBOTT PAYSON USHER, A.B. 1904, A.M. 1905.

Subject, History. *Special Field*, History of France. *Thesis*, "The History of the Grain Trade and of the Rise of the Metropolitan Market in France." Instructor in Economics, Cornell University.

ERNEST HATCH WILKINS, A.B. (*Amherst Coll.*) 1901, A.M. (*ibid.*) 1903.

Subject, Philology. *Special Field*, Romance Philology. *Thesis*, "The Chronology of the Youth of Boccaccio." Instructor in Romance Languages, Harvard University.

WILLIAM ALBERT WILLARD, PH.B. (*Iowa Coll.*) 1895, A.M. (*Tufts Coll.*) 1898, A.M. (*Harvard Univ.*) 1899.

Subject, Biology. *Special Field*, Zoölogy. *Thesis*, "The Cranial Nerves of *Anolis carolinensis*." Professor of Histology and Embryology, University of Nebraska.

GEORGE BENJAMIN WOODS, A.B. (*Northwestern Univ., Ill.*) 1903, A.M. (*Harvard Univ.*) 1908.

Subject, Philology. *Special Field*, English Philology. *Thesis*, "The Unpromising Hero in Folk-Lore, Epic, and Romance." Professor of the English Language and Literature, Miami University.

Thirty-one fellowships were assigned for the year 1909-10, including two John Harvard Fellowships without stipend. There were fifteen resident and sixteen non-resident appointments. A list of the incumbents follows. After the name of each fellow is given the name of his fellowship, the subject that he studied, and his present occupation. The place of study of the non-resident fellows is also indicated.

TRAVELLING FELLOWS

FREDERICK STEPHEN BREED, Christopher M. Weld Scholar. Philosophy. Berlin, first half-year; Harvard (as Resident Fellow), second half-year.

Associate Professor of Educational Psychology, University of Michigan.

PHILIP GREELEY CLAPP, Frederick Sheldon Fellow. Music. Stuttgart.

Reappointed. Continuing his studies at Stuttgart.

LATHAM CLARKE, Parker Fellow. Chemistry. Berlin.

Instructor in Industrial Chemistry.

EDGAR DAVIDSON CONGDON, Edward William Hooper Fellow. Zoölogy. Manchester, England, and Zürich.

Frederick Sheldon Fellow, at Vienna.

TOM PEETE CROSS, Parker Fellow. Celtic and Comparative Literature. Dublin.

Instructor in English.

WILLIAM BAYARD CUTTING, Jr., John Harvard Fellow. History. Egypt.

Died at Assouan, Egypt, 10 Mar., 1910.

CLARENCE HENRY HARING, John Harvard Fellow. History and Government. Oxford.

Austin Teaching Fellow in History. Third-year Graduate Student.

WALLIE ABRAHAM HURWITZ, Harris Fellow. Mathematics. Göttingen.

Instructor in Mathematics, Cornell University.

DUNHAM JACKSON, Rogers Fellow. Mathematics. Göttingen.

Edward William Hooper Fellow, at Göttingen.

- HENRY GODDARD LEACH, Parker Fellow. Scandinavian. Copenhagen.
Instructor in English.
- JACOB LOEWENBERG, James Walker Fellow. Philosophy. Paris.
Assistant in Philosophy.
- JOHN AVERY LOMAX, Frederick Sheldon Fellow. American Ballads. College Station, Texas.
Frederick Sheldon Fellow, at Austin, Texas, and Professor of English, University of Texas.
- ROBERT HOWARD LORD, Rogers Fellow. History and Government. Moscow.
Instructor in History.
- RAYMOND EDWIN MERWIN, Fellow in Central American Archaeology. Anthropology. Belize.
Reappointed. Continuing his studies in Central America.
- CYRUS ASHTON ROLLINS SANBORN, Charles Eliot Norton Fellow. Greek Studies. Athens.
Continuing his studies at Athens.
- MASON WHITING TYLER, John Thornton Kirkland Fellow. History and Government. London.
Instructor in History, Simmons College.

RESIDENT FELLOWS

- ALFRED BURPEE BALCOM, Henry Lee Memorial Fellow. Economics.
Austin Teaching Fellow in Economics. Third-year Graduate Student.
- HENRY ADAMS BELLOWS, Edward Austin Fellow. Comparative Literature.
Assistant Professor of Rhetoric, University of Minnesota.
- CARL MILTON BREWSTER, Francis Parkman Fellow. Chemistry.
Instructor in Chemistry, Mount Union College.
- THOMAS KITE BROWN, Jr., Willard Scholar. German.
Assistant in German. Second-year Graduate Student.
- FREDERICK LANSDOWNE CANDEE, South End House Fellow. Social Problems.
Reappointed.
- GEORGE PLUMMER HOWE, Hemenway Fellow. Anthropology.
Austin Teaching Fellow in Anthropology. Second-year Graduate Student.
- GEORGE FREDERICK KENNGOTT, Fellow in Social Ethics. Social Ethics.
Pastor, First Trinitarian Congregational Church, Lowell.
- HAROLD LEE KING, Ozias Goodwin Memorial Fellow. History and Government.
Instructor in History, Middlebury College.
- MELVILLE DARST LIMING, Adams Woods Fellow. History and Government.
Reappointed. First-year Law Student.
- HENRY WHEATLAND LITCHFIELD, Edward Austin Fellow. Classics.
Assistant in Greek and Latin. Fourth-year Graduate Student.
- ROBERT GRANT MARTIN, Edward Austin Fellow. English.
Frederick Sheldon Fellow, at London.
- JOHANN GOTTFRIED OHSOL, Henry Bromfield Rogers Memorial Fellow. Economics.
University Scholar. Second-year Graduate Student.
- ROBERT B REED, Robert Treat Paine Fellow. Social Science.
Professor of Social Science, Syrian Protestant College, Beirut, Syria.
- WILLIAM REES BREBNER ROBERTSON, Edward Austin Fellow. Zoölogy.
Thayer Scholar. Second-year Graduate Student.
- THEODORE TOWNSEND SMITH, John Tyndall Scholar. Physics.
Instructor in Physics, University of Kansas.

Probably the most important addition to the resources of the School during the past year was the establishment of the Frederick Sheldon Fund for travelling fellowships. The Graduate School of Arts and Sciences enjoys no preference in the distribution of the income of this fund, which is open without distinction to graduates in all departments of the University, but the competition for Sheldon appointments cannot fail to prove stimulating to the ablest men in the School, and to place increased emphasis upon the most significant side of its work, that which is concerned with the promotion of productive scholarship. The thirteen men who have been assigned Sheldon fellowships for 1910-11 in the departments comprised within this School represent the subjects of English, American Literature, Comparative Literature, History, Economics, Philosophy, Oriental Art, Music, Mathematics, Botany, Zoölogy, and Geology. Of these fellows eight are at work in Europe, two in Australia, one in the United States, one in India, and one in China.

Within the Graduate School of Arts and Sciences the most important gift of the year was the establishment of the Bayard Cutting Fellowship, with an income of \$1,125, founded in memory of W. Bayard Cutting, Jr., whose death is mentioned on page 89. In accordance with the direction of Mr. Cutting's studies, this is open in the first instance to students of history, and in case no candidate of sufficient merit applies in history, to students of European literature or economics. Special fellowships have been offered for the year 1910-11 in Social Education (\$500), Social Ethics (\$500), and for the study of heredity in American history (\$400), the last-named having been established by Frederick Adams Woods, M.D. 1898. In common with the other graduate departments, this School shares the benefits of the Princeton Fellowship (\$450), for graduates of Princeton pursuing studies at Harvard; of a Perkins scholarship for students from Iowa; and of the James A. Rumrill scholarship for students from certain Southern states. The number of scholarships to which students in several departments of the University are equally eligible shows a gratifying tendency to increase, but no agency has yet been provided for their just and convenient administration, and the award is accompanied by unnecessary confusion and delay.

Next to the well-endowed fellowship which enables a man of proved capacity to devote his whole time to advanced study and research, the most useful form of aid to graduate students is the University Scholarship of \$150. Such a scholarship, being

devoted entirely to the payment of tuition, offers no inducement to the type of man who expects to be supported as a reward for undertaking advanced study, while it performs a real service in helping an ambitious youth to overcome the initial obstacles of a scholarly career. It should be remembered that the tuition fee at Harvard is higher than in most American universities and in still sharper contrast with the free tuition of the state universities and the nominal charges of European institutions of learning, and that the cost of living and the additional expense of travel act as a further handicap for the students coming from the centre of population in the United States. For men from a distance the effect of a University Scholarship is to offset these disadvantages and enable a student to undertake work here upon substantially the same basis as in the graduate schools of other universities. Such appointments should not be used for mediocre men who have already been in residence, but should be given primarily to men from a distance who are anxious to come to Harvard and have not had a chance to demonstrate their fitness for the higher appointments. For this purpose a moderate increase in the number of University Scholarships would entail no possible loss to the Corporation and would prove a wise investment of funds. That the number of applicants for appointments to fellowships and scholarships is steadily increasing appears from the statistics given in Table XI.

TABLE XI. — FELLOWSHIPS AND SCHOLARSHIPS (1908-11)

1. *Applications and Appointments*

	1908-09	1909-10	1910-11
Spring applicants for reappointment or promotion	61	73	59
Spring applicants for a first appointment	224	272	300
Later applicants	36	37	39
	—321	—382	—398
Appointed to fellowships	22	24	24
Appointed to scholarships	93	86	91
Appointed instructors, teaching fellows, or assistants	32	23	32
	—147	—133	—147
Deduct for repetitions	6	5	1
	—141	—128	—146
Entered or continued in the Graduate School of Arts and Sciences without receiving any of the above-named appointments	36	47	68
Entered undergraduate classes of Harvard College	1	2	2
Entered other Departments of the University	6	6	8
	— 43	— 55	— 78
Applicants who were at the University in the year following their applications	184	183	224
Applicants not at the University in that year	137	199	174
	—321	—382	—398

2. *Classification of Applicants and Appointees*

	1908-09		1909-10		1910-11	
	Applicants	Appointees	Applicants	Appointees	Applicants	Appointees
Students of Philology	128	42	134	41	161	44
Students of History, Political Science, Philoso- phy or Education	100	36	132	34	131	40
Students of Mathematics, Physics, or Chemis- try	66	25	68	21	67	20
Students of Natural History	19	8	37	12	32	10
Students of other branches, or unclassified . .	8	4	11	2	7	1
	321	115	382	110	398	115
Students in Graduate School of Arts and Sciences	121	56	131	51	131	53
Students in Harvard College	21	6	23	5	22	4
Students in other Departments of the Univer- sity	3	1	2	-	5	-
Former students in some Department of the University	35	10	34	8	33	8
Persons never previously members of the Uni- versity	141	42	192	46	207	50
	321	115	382	110	398	115
Harvard Bachelors of Arts or Science, not pre- viously graduated elsewhere	36	18	40	18	37	18
Harvard Bachelors of Arts or Science pre- viously graduated elsewhere	7	2	2	-	6	3
Graduates of other institutions, not Harvard Bachelors of Arts or Science	222	72	269	73	298	70
Undergraduates of Harvard College or Law- rence Scientific School, not already gradu- ated elsewhere	23	6	23	5	21	4
Undergraduates of other institutions and other non-graduates	33	17	48	14	36	20
	321	115	382	110	398	115

The members of the Administrative Board for 1909-10 were Professors W. M. Davis, Mark, H. W. Smyth, Kittredge, Münsterberg, Gay, Walz, Baxter, and the Dean. Ten meetings were held during the year. A committee of the Board, consisting of Professors Mark, Kittredge, and the Dean, prepared and printed, through the Publication Agent of the University, a list of the Doctors of Philosophy and Doctors of Science of Harvard University, with the titles of their theses and the date and place of publication in the case of the printed theses. The list, which

includes six hundred and eight names, is complete from 1873 to 1909, and gives the address and present occupation or official position of each doctor.

As my predecessors have pointed out, the Graduate School of Arts and Sciences does not constitute a distinct entity like the other graduate schools of the University. Its instruction is given by a number of distinct departments, and its students are widely scattered and have few opportunities of mutual acquaintance beyond the limits of their respective fields of study. The reservation of Conant Hall for members of the Graduate School has proved of value in furnishing a local centre for the members of the School, and another dormitory of the same type could easily be used if it were available. There is real need for a dormitory or apartment house for married graduate students, who find it increasingly difficult to secure suitable accommodations for themselves and their families in Cambridge. It seems entirely feasible to erect in the neighborhood of the University such a building which would provide apartments at a reasonable rate and would at the same time yield a fair return on the investment.

In general, however, the most pressing needs of the Graduate School are the needs of the departments in which its students are at work — an adequate library building, better laboratory facilities, especially in chemistry, and the strengthening of the Faculty. With a collection of books at their disposal such as few of the world's universities possess, our teachers and students of history and literature constantly suffer for the lack of such seminary and study rooms as are now regularly provided in connection with much smaller libraries, while the opportunities of the stack are steadily being curtailed by the space required for the rapidly increasing mass of books. With respect to the Faculty, it should always be borne in mind that the Graduate School of Arts and Sciences is the only school which does not possess a body of teachers exclusively devoted to its work. The training of graduates in law, medicine, theology, applied science, and business is in the hands of men specially appointed for that purpose; only in the humanities and in pure science does Harvard require its teachers to divide their time between graduate work and elementary instruction. Such a system has, of course, its advantages, but so long as this double demand is made, the body of instructors in each department must necessarily be large as well as strong, and for the teaching

of advanced students its greatest strength must be at the top. In the choice of his place of study the graduate student, unlike the undergraduate or the student of law or medicine, is influenced not so much by the general reputation of the school as by the opportunities in his special department as compared with those of other universities; and he cares less for the size of the department as a whole than for the number and quality of superior teachers and investigators and the extent to which they are free to direct higher study and to engage in the original investigations without which such study withers at the root. Graduate instruction in America is still too largely a by-product of undergraduate teaching, but the day has passed when a graduate school can hope to grow by its own momentum, and the future lies with the school which deliberately and wisely develops a number of departments of pre-eminent excellence on the side of the most advanced work.

CHARLES H. HASKINS, *Dean.*

THE GRADUATE SCHOOL OF APPLIED SCIENCE

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — I have the honor of submitting to you the following report on the Lawrence Scientific School and the Graduate School of Applied Science for the academic year 1909-10.

There were thirteen students in the Lawrence Scientific School, of whom twelve were in the fourth and one in the third year, distributed among the several departments as shown in the following table:

DISTRIBUTION OF STUDENTS IN THE FOUR-YEAR PROGRAMMES IN THE LAWRENCE SCIENTIFIC SCHOOL

	1909-10
Civil Engineering	3
Mechanical Engineering	2
Electrical Engineering	3
Mining and Metallurgy	5
Total	13

The enrolment and distribution of students in the Graduate School of Applied Science are shown in the following tables:

ENROLMENT BY YEAR IN THE GRADUATE SCHOOL OF APPLIED SCIENCE

First-Year	63
Second-Year	15
Third-Year	7
Fourth-Year	2
Total	87

ENROLMENT BY SUBJECTS IN THE GRADUATE SCHOOL OF APPLIED SCIENCE

Civil Engineering	14
Mechanical Engineering	7
Electrical Engineering	17
Mining and Metallurgy	18
Architecture	5
Landscape Architecture	9
Forestry	12
Applied Biology	4
Applied Chemistry	0
Applied Physics	1
	87

COLLEGES AND UNIVERSITIES REPRESENTED BY GRADUATES IN THE
GRADUATE SCHOOL OF APPLIED SCIENCE

Bowdoin College	1	Purdue University	2
Brown University	2	Rensselaer Polytechnic Institute .	1
Carleton College	1	St. Mary's College	1
Clark University	1	South Dakota State College . . .	1
Columbia University	1	Swarthmore College	1
Dartmouth College	6	Trinity College (Conn.)	1
Hamline University	1	Tulane University	1
Harvard University	45	University of Berlin	1
Hobart College	1	University of Colorado	1
Johns Hopkins University	1	University of Maine	1
Lake Forest College	1	University of Michigan	1
Mass. Agricultural College . . .	1	University of Wyoming	1
Mass. Institute of Technology . .	2	West Virginia University	1
New Hampshire College	1	Williams College	2
No. Georgia Agricultural College	1	Yale University	2
Park College	1		

As shown by the above table, the total number of colleges and universities represented by graduates in the Graduate School of Applied Science was thirty-one.

In addition to the registration above tabulated ten students were registered in the School too late to appear in the *University Catalogue*. Of these two were registered in the Bussey Institution, which, because of the value of the summer months for biological work, continues in full force through the summer, and has so organized its work as to make these months, ordinarily constituting a recess, a part of its academic year. Such students, although their work comes within the summer months, should be regarded as students in full standing in the University.

The average age of the students in the Graduate School during the year under consideration was twenty-four years and two months. Of the eighty-two regular students in the Graduate School, forty-nine entered the School immediately on receipt of the bachelor's degree from their respective colleges. Of the remaining thirty-three, thirteen entered after the lapse of one year, six after the lapse of two years, three after the lapse of three years, five after the lapse of four years, and six after the lapse of six or more years. Forty-five entered from Harvard College; thirty-seven from other institutions. Of those entering from Harvard thirty-four entered directly. The average length of time which elapsed between graduation and entering the School, extending this average to include those who entered immediately, was one year, three months.

The Division of Engineering was strengthened by the addition to its staff of Professor G. F. Swain in Civil Engineering and Professor H. E. Clifford in Electrical Engineering. Partly in consequence of these appointments, partly in the process of general reorganization, many changes were made in the courses of instruction. The following is a list of the changes and additions in the courses in engineering: —

- (a) *Engineering 4e* (Road Engineering), given three times a week during February and March by Professor Hughes and no longer combined with *Engineering 8a* to count as a half-course.
- (b) *Engineering 7b* (Theory and Design of Structures of Wood, Stone, and Metal), substituted for *Engineering 7a* (Bridges and Buildings — formerly given by Professor Johnson) and given by Professor Swain. Equivalent to $1\frac{1}{2}$ courses.
- (c) *Engineering 8a* (Foundations, Masonry, and Fireproofing — Materials and Methods), increased from a two months' to a half-year course and given by Professor Killam in place of Professor Johnson.
- (d) *Engineering 16a* (Generation, Transmission, and Utilization of Electrical Energy — Elementary course), a new course by Professor Kennelly.
- (e) *Engineering 16b* (Illumination and Photometry — second half-year), a new course given by Professors Kennelly and Clifford.
- (f) *Engineering 16e* (Alternating-Current Machinery — second half-year), reduced from a double course to one having four meetings a week for one half-year. By Professor Clifford in place of Professor Adams.
- (g) *Engineering 16f* (Electrical Engineering Instruments and Measurements — half-course), a new course by Mr. Crane substituted for the former *16f* (Electrical Engineering Laboratory).
- (h) *Engineering 16g* (Alternating Currents — first half-year), changed slightly in title and from a half-course given by Professor Kennelly to practically a full course (five meetings a week during first half-year) by Professor Clifford.
- (i) *Engineering 16h* (Alternating-Current Machinery — Laboratory — second half-year), a new course, principally laboratory work, given by Professor Adams and closely coördinated with *Engineering 16e*.
- (j) *Engineering 20b* (Electrical Engineering Research), a new course by Professor Clifford.
- (j¹) *Engineering 20e* (Structures of Wood, Stone, and Metal), given by Professor Swain in place of Professor Johnson.
- (k) *Engineering 20j* (Commutation in Direct-Current Machines), Professor Adams, discontinued and included in *Engineering 20a* (Professor Adams), now a general course in Electrical Research.
- (l) *Engineering 20l* (Telegraphy and Telephony), Professor Kennelly, discontinued and included in *Engineering 20c* (Professor Kennelly), now a general course in Electrical Research.
- (m) *Engineering 20n* (Refrigeration) — a new course by Professor Marks.

The full-course enrolments in the Division of Engineering during the year 1909-10 and the three immediately preceding years, covering the period since the establishment of the Graduate School of Applied Science, are as follows:—

	1906-07	1907-08	1908-09	1909-10
First-year Mathematics	112	132	106	81
Engineering Subjects, including Calculus	1,044	1,140	974	966
Total full-course enrolments . . .	1,156	1,272	1,080	1,047
Repeated at Summer Camp	?	?	11	19
	?	?	1,091	1,066

This table is interesting in showing that the decrease in enrolment was by no means as large as might have been expected during the process of transition from an undergraduate to a graduate school. During this change many of the technical courses have been withdrawn from free election by undergraduates. The figures for 1908-09 and 1909-10 still show a decline in enrolment, but one less marked than in the earlier years. However, this process will almost certainly continue for two or three years more. Indeed, the decrease may be even greater for the next few years in consequence of the new rules adopted by the Faculty in regard to choice of electives.

The Division of Engineering is seriously in need of enlarged quarters. The growth of the department has already been such as to crowd out from Pierce building legitimate tenants, such, for example, as the Division of Forestry. Even when devoted entirely to the Division of Engineering it is inadequate in its floor space, particularly on the ground and basement levels.

In the Division of Mining and Metallurgy Professor E. D. Peters, who had been Professor of Metallurgy since 1904-05, was appointed Gordon McKay Professor of Metallurgy. Mr. L. C. Graton was made Instructor in Mining Geology. Mr. Graton gave the advanced course in Ore Deposits formerly given by Professor Smyth and a new course on the Geology of Fuels, Fluxes, and Refractory Materials. This appointment gave a partial relief to Professor Smyth from the too heavy burden that he had been carrying for many years and enabled the Division to enlarge its offerings in a hitherto neglected field. The custom, now established for some time, of having lectures in a particular field by specialists, was continued during the year. One course of lectures was on Coal Mining by Mr. R. V. Norris, one on the Economics of Mining by Mr. J. R. Finlay, both

courses somewhat extended from the lectures given in previous years to adapt them still further to the needs of the students. Mr. L. T. Nelson, Superintendent of the Sullivan Machinery Company, gave one lecture on Deep Mine Hoisting. It is very important that this policy of inviting eminent specialists to lecture on particular topics be continued.

One of the most pressing needs of the Division of Mining and Metallurgy is a working library for students. The system of instruction in many of the advanced courses is somewhat similar to the Case System in law, with this difference, however, that whereas in law typical cases of permanent value can be abstracted for the good of the students, in Mining and Metallurgy the change in the arts is so rapid that the practice of one decade may become obsolete in the next. The work must be conducted with the continually changing literature of current publications. For this purpose the instructors in the Division have made a practice of lending their copies of periodicals and would gladly extend this practice if a suitable room in the care of an attendant were provided. Such a room can be provided by extending a floor over the upper part of the Laboratory of Metallurgical Chemistry and the cutting of dormer-windows in the sloping roof. In this way 1,500 square feet of additional floor space can be made available at an expense of about \$2,000. Adequate space, however, for the work of the Division can be provided only by the erection of a new building or by a very general reconstruction and enlargement of the present building.

This year has been a critical year for the Department of Architecture, both its graduates and undergraduates decreasing greatly in numbers. This decrease has come from the closing of many of the technical courses to undergraduates in the process of liberalizing the undergraduate study leading to the Graduate School. The situation in regard to numbers, however, is only temporary, if there be merit in the recommendation of the Committee on Education of the American Institute of Architects, in accordance with whose earnest recommendation the Department of Architecture has been reorganized.

The Department of Landscape Architecture shows a satisfactory growth. In its organization, comparatively independent of the Department of Architecture, it has met with some advantages and some embarrassment. Its advantage lies in the recognition of Landscape Architecture as an independent profession. Its disadvantage arises from the increased difficulty

in the adjustment of the collateral courses in Architecture to its needs, and reciprocally the adjustment of its courses to the needs of the students of Architecture. The Department acquired a new strength by the transfer of Mr. B. M. Watson from the Bussey Institution, and by a satisfactory arrangement with the Division of Forestry for the instruction of its students at the beginning of the year at Petersham in silviculture and such subjects in Forestry as are of value in landscape gardening.

It is obvious that a travelling fellowship, comparable to the Nelson Robinson Jr. and Julia Amory Appleton Fellowships in Architecture, would be of the utmost value in such a subject as Landscape Architecture.

In the Division of Forestry there has been great improvement in respect to the physical equipment at Petersham, a gift of \$942.37 being of timely use in improving the buildings, grounds, and farm outfit. A second building has been made habitable for students, a shed added to the barn, and a considerable acreage of land put in shape to supply necessary hay and grain. Much remains to be done in the way of organizing the Harvard Forest, but the main enterprise, practical instruction in a forest actually under management, is now well under way. Its value as a laboratory, experiment station, and training ground exceeds expectation.

Greatly in contrast to the general prosperous condition of affairs at Petersham, the accommodations of the Division at Cambridge, where a large amount of library and class-room work must be done, are seriously deficient. For its quarters, the Division has only the upper floor of the small extension to the north of Lawrence Hall, inconvenient and inadequately heated. One lecture room, a narrow reading room, and an office occupy its small floor space and are separated by partitions so thin that voices in one room are disturbingly audible in the others. A small reference library has been collected in the reading room, but it is inadequate and difficult to care for. It is of the utmost importance that a department so well provided for in every other respect should have the physical conveniences, rooms, tools, and books, with which to perform its Cambridge work.

The year 1909-10 was the second year of the activity of the Bussey Institution with its new purpose and under its new form of organization. During the first year the work of the Institution was carried on by Professor W. M. Wheeler in Economic Entomology and Professor W. E. Castle in Plant Genetics. In

the year under report, Dr. Edward Murray East joined the staff of the Bussey Institution as Assistant Professor of Experimental Plant Morphology, coming from the Connecticut Agricultural Station. Through the generosity of Dr. Jenkins, the Director of the Connecticut Agricultural Station, Dr. East was able to bring with him several lines of investigation which he already had well under way. During the year Mr. C. T. Brues, as Instructor in Economic Entomology, took the place of Mr. Paul Hayhurst. Mr. Brues is making a specialty of Economic Forest Entomology, seeking to correlate his work as far as possible with that of the Division of Forestry.

During the year the physical conditions for work at the Bussey Institution were improved in many respects. The main building was thoroughly cleaned, repaired, and refinished inside, and its outer walls, which were settling and cracking in several places, were reset and repointed. The third floor, which in the past had been little more than an attic, was finished and partitioned so as to accommodate the library, a photographic room, and several small research rooms. The large lecture room on the ground floor was equipped with modern appliances. A room on the third floor of the main building was equipped for photographic and microphotographic work. A tract of about an acre and a half near the main building was securely fenced and prepared for experimental work in plant genetics. Two of the three green-houses were put in repair. The quarters for the animals for experimental work in genetics, both indoors and out, were enlarged and improved. Contributions from a number of alumni interested in the work of the Bussey Institution rendered this possible.

During the spring of the year a number of public lectures were given on Sunday afternoons on biological subjects of economic value and of popular interest. The following lectures were given and were all well attended:

"Insects as Carriers of Disease, (1) The House-fly and its Allies, (2) Mosquitoes and their Allies," by Professor Wheeler; "Mendel's Law of Heredity" and "Variation and Selection in Evolution and in Animal Breeding," by Professor Castle; "The Gypsy and Brown-tail Moths" and "Insects Injurious to Elm Trees," by Mr. Brues; "Making New Plants by Selection" and "Making New Plants by Hybridization," by Professor East.

The scientific output of the Bussey Institution for the year was very great. Professor Wheeler published his great treatise,

"Ants, Their Structure, Development, and Behavior," the result of several years' work, besides several papers on related subjects. Other papers in entomology were published by Mr. C. T. Brues, Mr. J. W. Chapman, and Mr. W. Reiff, Professor Wheeler's Assistant, while Professor Castle, Professor East, Dr. John C. Phillips, and Mr. C. C. Little carried forward with no little success their work in animal and plant genetics.

The service which the University has endeavored to render toward the alleviation of the gypsy and brown-tail moth pest in New England is worthy of further notice. As noted in the last annual report, through the generosity of Mr. Ernest B. Dane, of Brookline, a fungus parasite was, despite great difficulty, successfully imported from Japan. This, however, was but the beginning of the difficulties which such labors involved. Equally formidable with the successful importation is the carrying of the parasite from season to season. The parasite reached this country too late to be of service in the season of 1909. With very great difficulty it was carried through the summer and ultimately through the winter in the form of resting spores. In the spring of 1910 the resting spores renewed their activity and several plantings of the fungus were made. That it was fatal to the gypsy-moth caterpillar had already been demonstrated. By the experience in the spring of 1910 it was shown that it gave promise of being at least a small factor in the great problem of ridding the community of the gypsy moth. There still remain many problems in connection with its further development, — the carrying of it through the winter in larger quantities, and since it is more efficient in the moist days of spring than in the later days of the dry and hot summer, its propagation earlier in the season. There also remains the problem as to the most efficient form for its propagation and planting. Arrangements were made with the Gypsy Moth Commission to place Mr. Speare, Professor Thaxter's Assistant in this work, on the staff and in the pay of the Commission, but with the understanding that he is to carry forward his work under the immediate supervision of Professor Thaxter.

During the year, by a joint recommendation to the Faculty from the Administrative Boards of the Graduate School of Arts and Sciences and the Graduate School of Applied Science, the Faculty transferred the administration of all Master of Science degrees and Doctor of Science degrees to the Graduate School of Applied Science. By this arrangement the degrees in the

Graduate School of Arts and Sciences will hereafter be the Master of Arts and Doctor of Philosophy, and the degrees in the Graduate School of Applied Science will be Master of Science and Master in specified fields of applied science, and the degree of Doctor of Science, the latter degree being administered in a manner similar to that of the degree of Doctor of Philosophy in the Graduate School of Arts and Sciences.

WALLACE C. SABINE, *Dean.*

THE GRADUATE SCHOOL OF BUSINESS ADMINISTRATION

TO THE PRESIDENT OF THE UNIVERSITY:—

SIR, —I have the honor of presenting my report upon the Graduate School of Business Administration for the academic year 1909–10, the second year of the School's work.

The number of students registered is shown in the following table, counting as "regular" students college graduates taking full work in the School:—

	1908	1909
Regular students:		
First-year	33	42
Second-year	00	8
	—33	—50
Special students:		
(a) College graduates taking partial work	25	15
(b) Not holding college degrees	22	26
	—47	—41
	—	—
Totals	80	91

Of the total of ninety-one students in 1909–10 sixty-five held degrees from the following colleges:—

Boston College	1	Tufts College	2
Brigham Young College	1	Université de Rennes (France) ..	1
Clark College	3	University of Rochester	1
Cornell University	1	Wabash College	1
Dartmouth College	1	Washington and Lee University ..	1
Harvard University	42	Williams College	1
Indiana University	1	Wilmington College	1
Mt. Allison College (N.B.)	1	Yale University	3
Northwestern University	1		—
Ohio Wesleyan University	1		65
Otterbein University	1	Total number of colleges..	19

(19 colleges represented, as compared with 14 in 1908–09.)

The geographical distribution of students was as follows:—

STATES:		STATES:	
Connecticut	1	Ohio	6
Illinois	1	Rhode Island	1
Indiana	2	Utah	1
Iowa	1	Wisconsin	1
Kentucky	1		
Maryland	1	FOREIGN COUNTRIES:	
Massachusetts	56	Brazil	1
Minnesota	1	Canada	1
Missouri	2	China	1
New Hampshire	1	France	2
New York	7	Japan	2
North Dakota	1		

(16 states and 5 foreign countries, as compared with 12 states and 2 foreign countries in 1908-09.)

• Average ages of students (taking age in years and months on dates of registration in each academic year):—

	1908-09	1909-10
First-year men	23.22 years	22.95 years
Second-year "	—	24.75 "
Special students	31.65 "	32.06 "
with degree	30.11 "	27.89 "
without "	32.66 "	34.47 "

The gradual decrease in the number of special students was foreseen in the report on the first year of the School, but in this class of special students the increase of those not holding college degrees has been the striking feature. The greater part of these, coming as they do from the immediate neighborhood, are enrolled for one or two half-courses given in the late afternoon hours. The number, however, of special students desiring to take full work in the School even though they could not take our degree was greater during the year 1909-10 than in the previous year, and on account of increased applications for this privilege from men living at a distance it was recommended that, beginning with the academic year 1910-11, such students could ordinarily take only two courses.

Voted, January 17, 1910, that, in the opinion of the staff of instructors in this School, the requirements for admission to the School of special students who are not college graduates should be modified, so that ordinarily such students will be permitted to take not more than a total of two courses, whether in the same year or in successive years.

This action was approved by a vote of the Faculty of Arts and Sciences. It was felt that the free admission of students not holding a degree was not consonant with the original intention, which was to extend this opportunity to business men of the immediate neighborhood desiring to take one or two courses only. It may be of interest to note that, although the special students on admission to the School have usually agreed as an earnest of their serious purpose to take the examinations in the courses, less than half in the two years have done so. It is perhaps not surprising that these students are reluctant to submit to the test of a final examination, but it is none the less regrettable that so large a percentage should fail to realize the value of a final review of the work of a course. After making this comment it is just to remark that the experience of a second year confirms the statement in last year's report, that the admission of these maturer men has brought a valuable element to the School.

The second-year class of students is only one-quarter of the number of first-year regular students which had been registered during the previous year. While this proportion of men remaining to complete the two-year course of the School is somewhat less than might be expected, it is probable that during the early years of the School, and until the value of its two-year course is fully recognized, a similar disproportion in the number of second-year students as compared with those who enter in the first year will continue to be found.

Each candidate for the degree is asked in his second year to prepare a brief thesis on some subject within the field where he is specializing. The subjects of the theses are given with the following list of those upon whom the degree of Master in Business Administration was conferred in June, 1910:—

George Remington Bonner, A.B. (*Williams Coll.*) 1908.

Thesis subject: "The Best Type of Floor Organization in a Department Store."

Ralph Bradley, A.B. 1909.

Thesis subject: "A Study of the Cost of Operating the Newton Circuit of the Boston and Albany R.R."

Burt Lawlor Colby, A.B. 1906.

Thesis subject: "The Classification of Freight and its Importance in Commodity Transactions."

Guy Horton Hunt, S.B. 1908.

Thesis subject: "Sales Methods in the American Automobile Industry."

Harold Thomas Johnson, A.B. 1909 (1908).

Thesis subject: "The Pennsylvania Convertible Bonds of 1915 as an Investment."

Maurice Joseph Lane, A.B. 1908.

Thesis subject: "The Convertible Bond in Railway Finance."

Pierre William Saxton, A.B. 1908.

Thesis subject: "Accounting for Sinking Funds."

Donald Barton Stewart, A.B. (*Yale Univ.*) 1908.

Thesis subject: "South America; its Commerce and Trade Facilities."

Mr. George Oliver May, of the firm of Price, Waterhouse and Company, had given one hundred and fifty dollars for prizes in this School, and it was decided to award this gift in two prizes, a first and second, of one hundred dollars and fifty dollars, respectively, for the two best graduating theses of the second-year men. The theses were read and graded by committees of three, representing the members of the teaching staff and outside authorities on each subject. The four best theses were then read by a committee of three, which awarded the first prize to Pierre W. Saxton and the second to George R. Bonner. These prizes will continue to be offered, through Mr. May's generosity, in subsequent years and will be known as the May prizes.

On April 25, 1910, by vote of the Corporation, there was established for the School an Administrative Board consisting of all the members of the staff holding Corporation appointments. This was done on the understanding recorded in the accompanying memorandum:—

"It was understood by the Corporation, in appointing an Administrative Board of the Graduate School of Business Administration, upon the recommendation of the staff of that School as communicated in a letter from Dean Gay to the President, dated April 23, 1910, that the administration of the School by such a Board should be a temporary arrangement, terminating with the year 1911-12, when a separate Faculty should be organized for the School, provided the means for continuing the School are then found."

Since all important decisions affecting the policy of the School from its beginning had been made at meetings of the teaching staff, the appointment of the Board was a formal recognition of what had proved to be successful in practice.

Certain changes in courses were made during the year on account of the withdrawal of Mr. Stuart Daggett, who had been during the first year Instructor in Transportation. The course in Railroad Organization and Finance (Business 27) was bracketed, while the course in Railroad Accounting (Business 30²) was given by Mr. William J. Hobbs, Fourth Vice-President and General Auditor of the Boston and Maine Railroad. Mr. Payson J. Treat

came for the year 1908-09 from Leland Stanford Jr. University and offered a course in this School on the Economic Resources of Eastern Asia and Australasia (Business 13²) which was bracketed for the following year. To the Department of Economic Resources there were added during the year two new courses, that on the Economic Resources and Commercial Policy of the Chief European States (Business 12²) given by Dr. M. T. Copeland, and a course on the Economic Resources and Commercial Organization of Central and South America (Business 14²), in general charge of Mr. William C. Downs of New York and Mr. P. T. Cherington of our staff, and given by a group of outside lecturers. Other courses given for the first time in 1909-10 were certain advanced courses, such as Accounting Problems (Business 2), Law of Business Associations (Business 6), the advanced course on the Economic Resources of the United States (Business 16), the advanced course in Industrial Organization (Business 18), the advanced course in Banking (Business 22), and the advanced course in Railroad Operation (Business 32). Mr. S. O. Martin was appointed Instructor in Economic Resources to travel on leave of absence during 1910-11 in South America in order to equip himself for the conduct of the course in the Economic Resources and Commercial Organization of Central and South America. His expenses during this year of preparatory study are met by a portion of the Preston gift and a grant from the Sheldon Fund.

It is pleasant to report the continued success of the experiment with coöperative lecture courses and the continued interest which business men assisting as specialists in these courses show in the work of the School. The courses in Industrial Organization (Business 17¹), Corporation Finance (Business 25²), and Economic Resources and Commercial Organization (Business 14²) were given in this way. The outside lecturers in these courses were as follows:—

BUSINESS 14²: ECONOMIC RESOURCES AND COMMERCIAL ORGANIZATION OF CENTRAL AND SOUTH AMERICA

Herbert Barber of New York: "Shipping Business between the United States and the River Plate."

Señor Don Ignacio Calderón, Minister from Bolivia: "Bolivia."

George L. Duval of New York: "Chile" and "Banking, Currency, and Foreign Exchange."

Dr. W. C. Farabee: "Relations of Native Races to Economic Problems of South America" and "The Rubber Industry."

Henry G. Granger of New York: "Colombia."

- Alpheus S. Hardy of New York: "Nicaragua."
 G. B. Kulenkampff of New York: "West Indies and Cuba."
 S. Mallet-Prevost, Esq., of New York: "Mexico."
 Hon. Charles H. Pepper of Washington, D.C.: "International Commercial Statistics of South America."
 Professor L. S. Rowe of the University of Pennsylvania: "Attitude of the Latin-American Nations toward the United States."
 J. Louis Schaefer of New York: "Peru."
 Wilfred H. Schoff of Philadelphia: "Republics of the Spanish Main"; "Agricultural Resources of Argentina," and "Banking, Currency, and Foreign Exchange."
 Herman Sielcken of New York: "Brazil."
 Professor J. Russell Smith of the University of Pennsylvania: "General Survey of the Transportation Problem to South America."
 W. H. Stevens of New York: "Banking, Currency, and Foreign Exchange."
 E. H. Wands of Washington, D.C.: "Ecuador."
 Professor R. deC. Ward: "Geographical Factors in South American Commerce."

BUSINESS 17²: INDUSTRIAL ORGANIZATION

- C. G. L. Barth of Philadelphia: "Routing."
 E. J. Bliss of Boston: "The Control of Sales through widely separated Stores or Branches."
 H. E. Davidson of Boston: "Salesmanship."
 Charles Day of Philadelphia: "Routing."
 J. O. Fagan of Boston: "The Limitations on Management by Trade Organization and by other Factors and the Limitations on Workmen's Efficiency by Trade Organizations."
 E. A. Filene of Boston: "Retail Merchandizing."
 H. L. Gantt of New York: "Compensation of Workmen; paying for Time versus paying for Results," and "Training of Workmen in Habits of Industry and Coöperation."
 Hon. James Logan of Worcester: "Some Problems of Management."
 Professor Henry C. Metcalf of Tufts College: "Industrial Accident Insurance."
 H. F. J. Porter of New York: "Industrial Betterment; developing the Efficiency of the Human Element in the Working Organization."
 Russell Robb of Boston: "Principles of Organization."
 Gershom Smith of Philadelphia: "The Machine-rate Method of distributing Indirect Expense."
 J. E. Sterrett of Philadelphia: "The Relation of the Accountant to Economical and Efficient Administration."
 F. W. Taylor of Philadelphia: "Task Management and its Nature"; "Task System and Workingmen," and "Planning Department; general Principles."

BUSINESS 25²: CORPORATION FINANCE

- A. Lowes Dickinson of New York: "Determination and Disposition of Profits."
 Professor F. H. Dixon of Dartmouth College: "Consolidation."
 Frederick P. Fish, Esq., of Boston: "Growth and Advantages of Corporate Enterprise."

- J. F. Hill, Esq., of Boston: "Financial Obligations of Corporations."
 Judge C. M. Hough of New York: "Insolvency and Receiverships."
 Adrian H. Joline, Esq., of New York: "Reorganization."
 T. W. Lamont, Esq., of New York: "Promotion and Flotation."
 George O. May of New York: "Determination and Disposition of Profits."
 George W. Perkins of New York: "International Harvester Company."
 F. P. Royce of Boston: "The Business of Local Public Service Companies and their Relation to the Public."
 F. B. Sears, Esq., of Boston: "Financial Obligations of Corporations."
 Henry L. Stimson, Esq., of New York: "Public Control."
 Robert F. Herrick, Esq., of Boston: "Industrial Combinations."

Lectures of a more general character were given to the students of the School by the following men representing different branches of business: —

- George D. Markham, of W. B. Markham and Company, St. Louis, Mo., on "Insurance, a useful Commercial Invention, and an interesting Occupation."
 Hon. Charles A. Prouty, of the Interstate Commerce Commission, Washington, D.C., on "The Freight Rate in Business and in Politics."
 John E. Gardin, Vice-President of National City Bank, New York, on "The Sight Rate of Foreign Exchange."
 Hugh Chalmers, President of the Chalmers-Detroit Motor Company, Detroit, on "Modern Methods of Salesmanship."
 W. G. McAdoo, President of the Hudson and Manhattan Railroad Company, New York, on "The Relations between Public Service Corporations and the Public."
 Arthur Reynolds, Des Moines National Bank, Des Moines, Iowa, on "Savings Departments for National Banks versus a Postal Savings System."

There were special lecturers in the following courses: —

BUSINESS 10

- Urbain J. Ledoux, of Boston, on "The Work of Foreign Chambers of Commerce in International Trade," on April 27, 1910.
 Professor J. Russell Smith, of the University of Pennsylvania, on "Ocean Transportation," on May 2 and 3, 1910.

BUSINESS 28

- J. A. Droege, Division Superintendent of the New York, New Haven and Hartford Railroad Company, Providence, R.I., on "Yard and Terminal Operation and its Relation to Train Service," on January 17, 1910.
 L. G. Morphy, Designing Engineer, Boston and Albany Railroad, Boston, on "Design of Railroad Terminals," on January 10, 1910.
 E. Rice, Chief Clerk, Motor Power Department, Boston and Albany Railroad, Boston, on "Work of the Master Car Builders' Association," on December 6, 1909.
 W. S. Stone, Grand Chief, Brotherhood of Locomotive Engineers, Cleveland, Ohio, on "Principles and Practice of the Pioneer Railroad Brotherhood," on January 24, 1910.

C. H. Wiggin, Superintendent, Motive Power, Boston and Maine Railroad, Boston, on "Locomotive Design and Maintenance," on December 20, 1909.

Appreciative mention should also be made of the industrial concerns which have courteously assisted our class-room work by opening their doors to our students. The following firms should be added to the list given in last year's report: —

Atlantic National Bank, Boston.
 Bliss, Fabyan & Co., Boston.
 Boston Gas Company, Boston.
 Boston Manufacturing Co., Waltham.
 Brown and Adams, Boston.
 C. F. Hovey & Co., Boston.
 Chandler and Co., Boston.
 Cochico Mills, Dover, N.H.
 First National Bank, Boston.
 Fore River Shipbuilding Co., Quincy.
 International Trust Co., Boston.
 Lowney Manufacturing Co., Boston.
 New England Telephone and Telegraph Co.
 Jordan, Marsh and Co., Boston.
 Old Colony Trust Co., Boston.
 Paine Furniture Co., Boston.
 Parker, Wilder and Co., Boston.
 Shepard, Norwell and Co., Boston.
 Siegel and Co., Boston.
 Simons, Hatch and Whitten Co., Boston.
 State National Bank, Boston.
 United States Rubber Co., East Cambridge.
 United States Rubber Co., Malden.
 United States Envelope Co., Worcester.
 Worcester County Institution for Savings, Worcester.

An interesting exhibit of office appliances was held for the benefit of the students in April, 1910, from the 25th to the 29th, in Upper Massachusetts Hall. The following firms participated in this exhibition: —

Burroughs Adding Machine Company.
 Derby Desk Company.
 Elliott-Fischer Company.
 Felt and Tarrant Manufacturing Co.
 Library Bureau.
 National Dictograph Co.
 Multigraph Sales Co.
 Yawman and Erbe.

In the first report the formation of advisory committees of business men representing the various industries was recom-

mended, and the members of the first committee of this kind, that on textiles, were named. During the past year, a second committee of this type was organized for the printing and publishing courses, consisting of Messrs. Thomas E. Donnelley of the Lakeside Press, Chicago, Ill.; E. Byrne Hackett, of the Yale University Press; Amor Hollingsworth, of Boston; H. L. Johnson, of Boston; C. C. Lane, of the Publication Office, Harvard University; J. Horace McFarland, of the Mount Pleasant Press, Harrisburg, Pa.; Donald Scott, of the Century Company, New York; D. B. Updike, of the Merrymount Press, Boston; and George Parker Winship, of the John Carter Brown Library, Providence, R. I.

With the assistance of this committee a series of new courses has been planned to provide specialized training for students entering the printing business. A new course on The History of the Printed Book will be given by Mr. W. C. Lane, the Librarian of the Harvard College Library, under the auspices of the Department of Fine Arts, while in this School a half-course will be given by outside specialists on "An Introduction to the Technique of Printing" for first-year students, while for second-year students there will be provided an advanced course in charge of Mr. C. C. Lane of the Publication Office. This interesting experiment will be watched with attention by the Advisory Committees in the other industrial groups.

The experiment of placing students at work during the summer vacation between their first and second years in the School has proved successful on its first trial. Of the eight students returning for the second year's work six found employment in the lines of business they planned later to enter. The reports of their employers indicate that their work was found satisfactory and the students themselves testify that the experience thus gained was undoubtedly of value.

It became apparent during the year under review that the quarters provided for the School in the stack of the Library were inadequate for the increased number of students in the School, and that this provision generously made by the Library had certain disadvantages both to the Library itself and to the students in the School. Arrangements were therefore made during the summer of 1910 to prepare in Lawrence Hall a commodious reading room for the use of the students in the School. The reference books and other material for use in the instruction of the School was transferred here during the summer and placed

in the charge of Mr. A. F. Crowley, who was appointed as Superintendent of the Business School Reading Room. A gift from Mr. Daniel W. Field of five hundred dollars aided materially in the equipment of the new Reading Room. This gift was the more valued since the donor as a special student in the School desired in this manner to express his interest in and appreciation of the work of the School.

The five University scholarships for the year 1909-10 were awarded as follows:—

George Remington Bonner, A.B. (*Williams Coll.*) 1908.

Charles Wesley Grace, A.B. (*Clark Coll.*) 1909.

Maurice Joseph Lane, A.B. 1908.

Pierre William Saxton, A.B. 1908.

Charles Augustus Whipple, A.B. 1909.

EDWIN F. GAY, *Dean.*

THE DIVINITY SCHOOL

TO THE PRESIDENT OF THE UNIVERSITY:—

SIR,—As Dean of the Divinity School I have the honor to present the following report for the year 1909-10.

In the Divinity School the year has been happily uneventful. With the exception of Professor G. F. Moore, who was absent in Germany as exchange professor, all the members of the Faculty were in residence throughout the year and their courses were given as announced. The retirement of Professor Toy and the absence of Professor Moore would have interfered seriously with work in the Old Testament department but for the presence of Professor Arnold, who generously increased his regular work in Andover to supply our deficiency, giving thus another illustration of the advantages to us of the Andover affiliation.

During the past year 51 students were enrolled in the regular School, of whom 5 left at the end of the first half-year and 2 entered at the beginning of the second half-year. The distribution was as follows:—

Resident Graduates	16
Senior Class	5
Middle Class	6
Junior Class	9
Special Students	6
Andover Students	9
Total	<u>51</u>

Thirty-seven colleges were represented as follows:—

Amherst College	3	University of Maine	1
Bates College	1	Mass. Institute of Technology	1
Beloit College	1	Miami University	1
Boston University	1	University of North Carolina .	2
Bowdoin College	2	Northwestern University . . .	2
Brown University	2	Ohio Northern University . . .	1
Carleton College	1	Ohio Wesleyan University . . .	1
Central College	2	Olivet College	1
Central University	1	Providence University	1
Central Wesleyan College . .	1	Shurtleff College	1
Colgate University	1	Tarkio College	1
Columbia University	1	University of Toronto	1
Drake University	1	Vanderbilt University	1
Earlham College	1	Wabash College	1
Harvard University	7	Wesleyan University	1
Iowa College	2	Westminster College	1
Johns Hopkins University . .	1	Yale University	<u>3</u>
University of Kansas	1		<u>53</u>
Leland Stanford Jr. University	1	Counted more than once . . .	<u>7</u>
McMaster University	1		<u>46</u>

Fifteen theological seminaries were represented by graduates as follows: —

Allegheny Theological Seminary	1
Bangor Theological Seminary	4
Boston University	3
Chicago Theological Seminary	2
Cobb Divinity School	1
Colgate Theological Seminary	1
Drake University	1
Drew Theological Seminary	2
Garrett Biblical Institute	1
Harvard University	3
Predigerseminar, Herborn, Germany	1
Pacific Theological Seminary	1
Rochester Theological Seminary	1
Vanderbilt University	2
Yale University	1
	<u>25</u>
Counted more than once	2
	<u>23</u>

The interchange of instruction between the Faculty of the School and the Faculty of Arts and Sciences indicates the extent of the contribution made by the Divinity School to the general work of the University. This interchange between the two Faculties in 1909-10 was as follows: —

Divinity students electing courses offered primarily by the Faculty of Arts and Sciences: —

Semitic	6 elections.
English	3 “
French	1 election.
History	6 elections.
Economics	10 “
Philosophy	42 “
Social Ethics	6 “
Education	2 “
Public Speaking	1 election.
	<u>77</u>

Non-Divinity students electing courses offered primarily by the Divinity School: —

Old Testament	21 elections.
New Testament	4 “
Church History	102 “
Theology	7 “
Ethics	81 “
	<u>215</u>

The interchange of instruction between the Harvard Divinity School and Andover Theological Seminary was as follows: —

Harvard Divinity students electing courses offered primarily by Andover Theological Seminary: —

Old Testament	8 elections.
New Testament	5 “
Church History	5 “
	<hr/> 18

Andover students electing courses offered primarily by the Divinity School: —

Old Testament	1 election.
New Testament	3 elections.
Church History	1 election.
Theology	6 elections.
Ethics	4 “
Public Speaking	1 election.
	<hr/> 16

Six members of the School received the degree of S.T.B. (one, *cum laude*), seven the degree of A.M., and three the degree of Ph.D. The degree of A.M. was also conferred, in February, upon three persons for work done in the Divinity School in the years 1902-03, 1905-06, and 1908-09, respectively, and, in June, upon one person for work done in the Divinity School in the years 1906-07 and 1907-08.

The following is a list of the Courses of Instruction given in the School in the year 1909-10. With each course is a statement of the number of students electing it from the Divinity School, Andover Theological Seminary, the Graduate School of Arts and Sciences, Harvard College, and Radcliffe College. In such Andover courses as were taken only by Andover students, no record of attendance is given. A list of the lectures delivered in the Lowell Institute course in King's Chapel is appended to the list of regular courses.

COURSES OF INSTRUCTION

OLD TESTAMENT

14. Professor LYON. — Hebrew. — Morphology. Selections from the prose narratives of the Old Testament. *First half-year.*
1 Div., 1 And., 4 Col.
22. Dr. DAVEY. — Hebrew (second course). — Syntax. Extensive reading in the Old Testament. *Second half-year.* 3 Div., 3 Col.
17. Dr. DAVEY. — Aramaic. — Daniel 2-7: selections from the Targums; Dalman's Aramäische Dialektproben. 1 Col.

18. Dr. DAVEY. — Syriac. — Brockelmann's *Syrische Grammatik*; selections from the Peshitto; Syriac prose of the classical period. 1 Gr., 2 Col.
4. Professor LYON. — History of Israel, political and social, till the capture of Jerusalem by the Romans. 10 Col.
10. Professor LYON. — Assyrian. 1 Div.
11. Professor LYON. — Assyrian (second course). 1 Div.
20. Professor LYON. — Research courses. 1 Div.

ANDOVER COURSES

- A3. Professor ARNOLD. — Hebrew (advanced course): The Prophetical Books of the Old Testament. — Interpretation and criticism of portions of the prophetic writings, selected with special reference to literary and historical problems. 1 Div., 2 Col.
- A5. Professor ARNOLD. — Introduction to the Old Testament. — History of the text; the formation of the Canon; historico-critical study of the origin, form, and contents of the several books. 5 Div., 3 Col.
- A6. Professor ARNOLD. — Religion of Israel. — History of the religious ideas and institutions of Israel from the earliest times to the Maccabean age. 2 Div.

NEW TESTAMENT

2. Professor ROPES. — Introduction to the Study of the New Testament. *First half-year*: The origin and early history of the New Testament writings. *Second half-year*: The teaching of Jesus Christ, and the theological and ethical ideas of the New Testament writers. 2 Div., 3 And., 1 Gr., 1 Col.
3. Professor ROPES. — The Gospels of Matthew, Mark, and Luke. 1 Div.
- 7 ¹/_{hf}. Professor ROPES. — The Apostolic Age. — Study of the Acts of the Apostles. *Half-course (first half-year)*. 1 Gr., 1 Rad.
- 15 ¹/_{hf}. Professor FENN. — The Theological Method of Jesus and Paul. *Half-course (first half-year)*. 5 Div.

ANDOVER COURSES

- A3 ¹/_{hf}. Professor RYDER. — The Gospel of John. *Half-course (first half-year)*.
- A4 ²/_{hf}. Professor RYDER. — The Epistles of John and the Apocalypse. *Half-course (second half-year)*.
- A5. Professor HINCKS. — The Life of Christ. 5 Div.

CHURCH HISTORY

1. Professor EMERTON. — The First Eight Christian Centuries. — The Conflict of Christianity with Paganism. Origin and Development of the Roman Papacy to its alliance with the Frankish State. The Germanic races as the basis of a new Christian civilization. 2 Div., 1 And., 5 Gr., 4 Col.
3. Professor EMERTON. — The Era of the Reformation in Europe, from the rise of Italian Humanism to the close of the Council of Trent (1350 to 1563). 2 Div., 8 Gr., 10 Col.

- 4a ¹hf. Professor E. C. MOORE. — The History of the Christian Church in Europe within the last three Centuries. *Half-course (first half-year)*.
2 Div., 29 Col.
- 4b ²hf. Professor E. C. MOORE. — The Expansion of Christendom in the Nineteenth Century. *Half-course (second half-year)*.
6 Div., 1 Gr., 43 Col.
6. Professor Emerton. — Practice in the Study and Use of Materials for Church History. 2 Gr.

ANDOVER COURSES

- A2. Professor PLATNER. — History of Christian Doctrine. 3 Div., 2 Col.
- A6. Professor PLATNER. — History of Early Christian Literature. 1 Gr.
- A7 ¹hf. Professor PLATNER. — The Expansion of Christendom from the beginning to the Eighteenth Century. *Half-course (first half-year)*.
- A8 ²hf. Professor PLATNER. — History of Congregationalism. *Half-course (second half-year)*. 2 Div.

THEOLOGY

- 1 ¹hf. Professor FENN. — Theism. *Half-course (first half-year)*.
14 Div., 3 And., 3 Gr.
- 2 ². Professor FENN. — Outlines of Systematic Theology. *Second half-year*. 7 Div.
6. Professor E. C. MOORE. — History of Christian Thought since Kant. 10 Div., 1 And., 3 Gr.
- 20b ²hf. Professor E. C. MOORE. — Philosophy of Religion. A Seminary. *Half-course (second half-year)*. 7 Div., 2 And., 1 Gr.
20. Professor E. C. MOORE. — Research courses. 3 Div.

ETHICS

1. Professor PEABODY, Dr. McCONNELL, Dr. FORD, and Dr. FOERSTER. — Social Ethics. — The Problems of Poor-Relief, the Family, Temperance, and various phases of the Labor Question, in the light of ethical theory. Lectures, special researches, and prescribed reading.
4 Div., 3 And., 7 Gr., 66 Col.
- 20a. Professor PEABODY. — Seminary of Social Ethics. — *Subject for the year*: Religion and the Social Question. 12 Div., 1 And., 5 Gr., 3 Col.

HOMILETICS AND PASTORAL CARE

- 1 ¹hf. Professor PEABODY. — An Introduction to Preaching. *Half-course (first half-year)*. 5 Div.
2. Professors PEABODY, E. C. MOORE, and FENN. — Preaching. 11 Div.

PUBLIC SPEAKING

1. Mr. KENNEDY. — Training in Voice and Speech. Preparatory to Course
2. *Once a week*. (Not counted for a degree.) 6 Div., 1 And.
- 2 hf. Asst. Professor WINTER and Mr. KENNEDY. — Sermon Delivery, Scripture Reading, Oral Discussion. *Half-course*. 6 Div.

KING'S CHAPEL LECTURES

CHRISTIANITY AS A RELIGION OF THE SPIRIT UNDER HISTORICAL
CONDITIONS

Professor W. H. RYDER. — Two lectures: The Gospels as Historical Records.

Professor J. H. ROPES. — One lecture: The Miracles of the New Testament.

Professor D. G. LYON. — Two lectures: The Physical and Social Conditions in which Christianity arose as illustrated by the Palestine of To-day.

Professor W. R. ARNOLD. — One lecture: The Relation of Primitive Christianity to Jewish Thought and Teaching.

Professor EPHRAIM EMERTON. — Two lectures: Early Christianity as affected by Conditions of Graeco-Roman Life.

Professor E. Y. HINCKS. — One lecture: The Essential Purpose of Jesus.

Professor A. P. FITCH. — One lecture: Certain Readjustments between the Church and the Community required by recent Theological and Social Changes.

Professor J. W. PLATNER. — One lecture: Independency as a Principle of Church Order.

Professor E. C. MOORE. — Two lectures: The Essence of Christianity. The Present Conflict concerning Christianity.

Professor DANIEL EVANS. — One lecture: The Abiding Significance of Jesus.

For the Summer School the general subject selected was "The Parish Minister," the purpose being to relate the diversified activities of a modern minister to the creative ideals of his vocation. Although the various topics and the list of lecturers seemed unusually attractive, the attendance was disappointingly small. Only 36 students enrolled for the entire course, showing however the usual wide geographical and denominational distribution. Sixteen students were from Massachusetts, 3 each from New York, Michigan, and Ohio, 2 from Illinois, and one each from Colorado, Iowa, Manitoba, Missouri, New Hampshire, Oklahoma, Pennsylvania, South Carolina, and Tennessee. Denominationally, there were 10 Episcopalians, 7 Congregationalists, 6 Unitarians, 3 Universalists, 3 Methodists, 2 Presbyterians, 2 Lutherans, and one each from the Disciples, United Presbyterians, and German Evangelicals. For the first time in the history of the School, tickets at 50 cents each were offered for single lectures, and 179 were sold. It may be that a few persons who but for this privilege would have registered for the full course were thus lost to the enrolment, but evidently this fact alone does not account for the diminished attendance, nor is it probable that other summer schools of theology in the vicinity unfavorably affected ours. Doubtless the increased cost of living which bears heavily upon

many clergymen, whose salaries are seldom raised correspondingly, was responsible for some absences, but the principal cause appears to have been that the subject chosen did not commend itself to many whom we justly reckon among our constituency. Ministers in active service believe that they know more about the practical details of their professional life than a summer school can teach them, and if they are to forego a large part of their brief vacations and be at considerable expense to attend lectures, it must be because the subjects presented are of fundamental importance, requiring expert treatment, and the lecturers announced are recognized as authorities in their respective academic fields. From this point of view there is an element of encouragement as well as of instruction in the small attendance, as testifying to the character of our constituency and the service desired and expected of our Summer School. The experience of this year seems to prove that only central themes of profound significance should be presented at the Summer School of Theology.

The following is a list of the lectures for the year 1910: —

Survey lectures.

- Professor H. G. MITCHELL. — Two lectures: The Old Testament.
 Professor W. H. RYDER. — Two lectures: The New Testament.
 Professor WILLISTON WALKER. — Two lectures: Church History.
 Professor R. B. PERRY. — Two lectures: Ethics.
 Professor D. R. DEWEY. — Two lectures: Sociology.
 Professor W. A. BROWN. — Two lectures: Theology.

The Minister as Preacher and as Leader of Public Worship.

- President A. P. FITCH. — Two lectures: The Preacher's Use of Scholarly Material.
 Rev. S. M. CROTHERS. — Two lectures: The Preacher's Use of Literature.
 Professor M. W. CALKINS. — Four lectures: The Psychology of Public Worship.
 Rev. RAYMOND CALKINS. — Three lectures: The Conduct of Public Worship.

The Minister in his Parish and in the Community.

- Rev. JAMES DENORMANDIE. — Three lectures: The Parish Minister.
 President W. H. P. FAUNCE. — Four lectures: The Principles of Religious Education.
 Rt. Rev. C. D. WILLIAMS. — Four lectures: The Minister and Divergent Social Interests.
 Rev. EDWARD JUDSON. — Three lectures: The Minister in the City.
 Rev. F. E. EMRICH. — Two lectures: The Minister in the Country.
 Professor T. N. CARVER. — Two lectures: The Sociological Problem of the Country Church.

Concluding lecture.

- Rev. G. A. GORDON. — One lecture: Some Things Worth While in Theology.

The following is a report of the Divinity Library for the year from August 1, 1909, through July 31, 1910. There were added to the Library 400 volumes and 35 pamphlets by purchase, 188 volumes and 157 pamphlets by gift. August 1, 1910, there were in the Library 38,208 volumes and 10,799 pamphlets. During the year 602 titles were catalogued in the author catalogue and 33 titles in the subject catalogue. There were borrowed from the stack for home use 1,661 volumes, from the stack for hall use 789 volumes, from the reserved books for overnight use 798 volumes.

On Alumni Day, June 28, the tablet in memory of John White Chadwick, a graduate in the Class of 1864, was dedicated with appropriate ceremonies. This tablet, a most welcome and beautiful addition to those already on the walls of our Chapel, was given by friends in the Brooklyn church which Mr. Chadwick served for forty years, and has been placed directly under that in memory of Emerson, whose Divinity School address would doubtless have been regarded by Mr. Chadwick as embodying the ideals of his own faithful and fruitful ministry.

W. W. FENN, *Dean*.

THE LAW SCHOOL

TO THE PRESIDENT OF THE UNIVERSITY:—

SIR, —I have the honor to present my report upon the Law School for the academic year 1909–10.

The year was saddened for all connected with the School by the death of the Dean, Professor James Barr Ames. He was in the thirty-seventh year of his service as a professor in the Law School, and in the fifteenth year of his service as Dean. During the whole term of his service as professor he never took a year's leave of absence from the School. He gave unstintedly his remarkable powers to building up the School along the lines originally laid down by Professor Langdell, and his own skill as a teacher had much to do with the success of the method of instruction known by Mr. Langdell's name. During Mr. Ames's administration as Dean the School had the largest expansion in its history, both in the number of students and in the development of its library and material resources. This development was attained in spite of the requirement of a college degree as a condition for admission to regular standing, and in spite of other stringent regulations designed to maintain a high standing of capacity and diligence.

At the close of the year Judge Jeremiah Smith, having completed twenty years of service as Professor in the Law School, retired from active service, intending to devote his time thereafter to study and writing. It would be an offence to Judge Smith's modesty to characterize properly here the work that he has done during his connection with the School.

The first table below exhibits the growth of the School during the last forty-one years in the number of students, in the number and percentages of the college graduates, and in the number of colleges represented by their graduates. The figures for the current year will probably be somewhat increased by later entries.

The second table below gives the courses of study and instruction during the year, the text-books used, the number of exercises per week in each course, and the number of students who offered themselves for examination in each course at the end of the year.

Year	Whole No. of Students	Total of College Graduates	Harvard Gradu- ates	Graduates of other Colleges	Non- Gradu- ates	Per cent of College Graduates	No. of Col- leges rep- resented
1870-71	165	77	27	50	88	47	27
1871-72	138	70	34	36	68	51	25
1872-73	117	66	34	32	51	56	25
1873-74	141	86	49	37	55	61	25
1874-75	144	82	63	19	62	57	18
1875-76	173	93	60	33	80	54	25
1876-77	199	116	74	42	83	58	30
1877-78	196	121	80	41	75	62	30
1878-79	169	109	71	38	60	64	24
1879-80	177	118	90	28	59	66	20
1880-81	161	112	82	30	49	70	19
1881-82	161	99	66	33	62	61	22
1882-83	138	93	58	35	45	67	32
1883-84	150	105	75	30	45	70	25
1884-85	156	122	85	37	34	78	31
1885-86	158	122	83	39	36	77	29
1886-87	188	143	88	55	45	76	34
1887-88	225	158	102	56	67	70	32
1888-89	225	158	105	53	67	70	32
1889-90	262	189	122	67	73	72	41
1890-91	285	200	135	65	85	70	33
1891-92	370	257	140	117	113	69	48
1892-93	405	266	132	134	139	66	54
1893-94	367	279	129	150	88	76	56
1894-95	413	310	139	171	103	75	74
1895-96	475	380	171	209	95	80	82
1896-97	490	408	186	222	82	83	82
1897-98	551	490	229	261	61	89	77
1898-99	564	503	212	291	61	89	78
1899-00	613	557	236	321	56	91	67
1900-01	655	605	252	353	50	92	83
1901-02	633	584	247	337	49	92	92
1902-03	644	600	241	359	44	93	94
1903-04	743	695	272	423	48	94	111
1904-05	766	711	286	425	55	93	114
1905-06	727	716	295	421	11	98	118
1906-07	705	696	260	436	9	99	126
1907-08	719	712	276	436	7	99	122
1908-09	690	680	256	424	10	99	121
1909-10	765	759	257	502	6	99	127
1910-11	790	778	*240	538	12	98	135

During the twelve months from August 1, 1909, to August 1, 1910, 5,490 bound volumes and 184 pamphlets were added to the library. The library contained, August 1, 1910, about 120,600 volumes and about 13,390 pamphlets. Among the more important additions to the library during the year were the Charter and Acts of Massachusetts Bay, 1699, with added session laws, 1699

* 18 Harvard Seniors who have completed the full College course, but have not received their diplomas, are reckoned as graduates. Prior to 1905-06 Harvard Seniors were not reckoned as graduates but as non-graduates.

Instructors	Studies and Text-books	Exercises per week	Number of students examined
First Year			
Prof. Williston } Prof. Wyman }	Contracts. Williston's Cases on Contracts	3	321
Prof. Wambaugh	Agency. Wambaugh's Cases on Agency	2	314
Prof. Warren	Property. Gray's Cases on Property, vols. 1, 2 (2d ed.)	2	324
Prof. Smith	Torts. Cases on Torts: Ames, vol. 1 (3d ed.), Smith, vol. 2 (2d ed.)	2	322
Prof. Beale and Messrs. Joseph Warren and Freund }	Criminal Law and Procedure. Beale's Cases on Criminal Law (2d ed.)	1½	315
Prof. Ames and Mr. Scott	Civil Procedure at Common Law. Ames's Cases on Pleading (2d ed.)	1½	333
Second Year			
Prof. Brannan	Bills of Exchange and Promissory Notes. Ames's Cases on Bills and Notes and Brannan's Negotiable Instruments Law	2	75
Prof. Gray	Evidence. Thayer's Cases on Evidence (2d ed.)	2	195
Prof. Ames and Mr. Scott	Jurisdiction and Procedure in Equity. Ames's Cases in Equity Jurisdiction, vol. 1	2	212
Prof. Warren	Property. Gray's Cases on Property, vols. 3, 4 (2d ed.)	2	215
Prof. Williston	Sales of Personal Property. Williston's Cases on Sales	2	208
Mr. Dutch	Admiralty. Ames's Cases on Admiralty	1	20
Prof. Williston	Bankruptcy. Williston's Cases on Bankruptcy	1	20
Profs. Beale and Wyman	Public Service Companies. Beale's Cases on Carriers (2d ed.) and Wyman's Cases on Public Service Companies (2d ed.)	2	111
Prof. Wambaugh	Insurance. Wambaugh's Cases on Insurance	1	69
Prof. Brannan	Damages. Beale's Cases on Damages (2d ed.)	1	35
Mr. Joseph Warren	Persons. Smith's Cases on Persons	1	49
Mr. Schaub	Quasi-Contracts. Scott's Cases on Quasi-Contracts	1	23

Third Year

Prof. Beale	Conflict of Laws. Beale's Cases on the Conflict of Laws	2	190
Prof. Wambaugh	Constitutional Law. Thayer's Cases on Constitutional Law	2	133
Prof. Warren	Corporations. Warren's Cases on Private Corporations	2	213
Prof. Brannan	Partnership. Ames's Cases on Partnership	2	14
Prof. Gray	Property. Gray's Cases on Property, vols. 5, 6 (2d ed.)	2	89
Prof. Wyman	Suretyship and Mortgage. Ames's Cases on Suretyship. Wyman's Cases on Mortgage (revised ed.)	2	167
Prof. Brannan	Bills of Exchange and Promissory Notes. Ames's Cases on Bills and Notes and Brannan's Negotiable Instruments Law	2	26
Prof. Gray	Evidence. Thayer's Cases on Evidence	2	13
Prof. Ames and Mr. Scott	Jurisdiction and Procedure in Equity. Ames's Cases in Equity Jurisdiction, vol. 1 Property II. Gray's Cases on Property, vols. 3, 4 (2d ed.)	2	1
Prof. Warren	Sales of Personal Property. Williston's Cases on Sales	2	2
Prof. Williston	Admiralty. Ames's Cases on Admiralty	2	11
Mr. Dutch	Bankruptcy. Williston's Cases on Bankruptcy	1	7
Prof. Williston	Public Service Companies. Beale's Cases on Carriers and Wyman's Cases on Public Service Companies	1	29
Prof. Wyman	Damages. Beale's Cases on Damages	2	58
Prof. Brannan	Equity III. Ames's Cases in Equity Jurisdiction, vol. 2	1	4
Prof. Ames and Mr. Dutch	Insurance. Wambaugh's Cases on Insurance	1	128
Prof. Wambaugh	International Law as administered by the Courts. Scott's Cases on International Law	1	39
Prof. Wambaugh	Jurisprudence. No text-book	1	3
Prof. Beale	Municipal Corporations. Smith's Cases on Municipal Corporations	1	6
Prof. Beale	Patent Law. No text-book	1	71
Mr. Stackpole	Persons. Smith's Cases on Persons	1	10
Mr. Joseph Warren	Quasi-Contracts. Scott's Cases on Quasi-Contracts	1	26
Mr. Schaub		1	24

to 1712; the Acts and Laws of the Colony of Rhode Island, 1719; the Acts and Laws of the Colony of Rhode Island, 1772; a valuable collection of the session laws of Maryland for various years between 1727 and 1762; the North Carolina Laws, Public and Private, for various years between 1789 and 1799; the Laws of Trinidad, 1883-1901; the Laws of Barbados, 1863-1892.

The collection of portraits of judges and lawyers has been increased during the year by eight engravings, one etching, and four photographs. A portrait of especial interest is a large framed photograph of Mr. Ames, presented by his family.

Twenty-nine scholarships were awarded to law students for the year 1909-10. The amount of each was \$150, and, with the exception of the Fisher Scholarship, they were given from the general resources of the School.

Several gifts have been received which should be mentioned. In December, 1909, Mrs. J. Montgomery Sears expressed the desire to establish in memory of her son, Joshua Montgomery Sears, who was a graduate of the School, four prizes to be awarded annually to students in the School who should have done the most brilliant work in their classes during the year. For this purpose Mrs. Sears proposed to establish a fund from the income of which prizes should be paid, and, in the meantime, to pay annually the sum of \$1,500. The first payment was made last April. These prizes will be awarded annually in October to four students of the highest rank and, in accordance with the terms of the gift, no regard will be paid to the pecuniary means of the recipients.

Mrs. James Barr Ames, in fulfilment of a wish expressed by Mr. Ames, gave the sum of \$10,000, the income of which is to be applied annually to any purpose which the Faculty may deem beneficial to the Law School. Mrs. Ames also largely increased the loan fund of the School by presenting to it a number of notes of former students to whom Mr. Ames had lent money, from time to time, in the past. Past experience shows that most of these notes will be paid with interest.

With the approval of the Corporation the Faculty voted to establish, beginning with the year 1910-11, a course of graduate study of one year leading to a doctor's degree in law. The requirements for admission as a candidate for this degree are, (1) such a degree in arts or science as would qualify the holder to enter the School as a candidate for the degree of Bachelor of Laws, and (2) the completion with high rank of the course pre-

scribed for the degree of Bachelor of Laws either in the Harvard Law School or in some other law school qualified to be a member of the Association of American Law Schools. To receive the Doctor's degree, candidates must pass with distinguished excellence examinations in courses requiring in the aggregate ten hours of lectures a week during the year, and in such courses must be included the course on the Roman Law and the principles of the Civil Law.

A plan was also approved, which will be carried out for the first time in the year 1910-11, to encourage among first-year students early and intelligent use of the library, and to render more effective the work of the law clubs. For this purpose six students of the third year, called advisers, have been appointed, whose duties are to explain to inquirers the arrangement of books and the method of finding authorities; to keep office hours in the reading room for this purpose; to sit in the law clubs; to help the first-year students in organizing law clubs; and to do such other similar work of a limited amount as the Law Faculty may, from time to time, require.

EZRA RIPLEY THAYER, *Dean.*

THE FACULTY OF MEDICINE

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — As Dean of the Faculty of Medicine I have the honor to present my report for the academic year 1909-10.

The Faculty of Medicine is the governing body of the Medical and Dental Schools and, as such, it is composed of certain of the teachers in each School. In order to facilitate the work of the Faculty of Medicine a modification of the organization of that body was made early in the year by which a Faculty Council was constituted, composed of the President, the Dean, and the Chairmen of the six divisions into which most of the departments of the Medical School were grouped. The Faculty Council considers questions arising in regard to the course of study, the correlation or the extension of medical studies, and the general development of the Medical School, and reports on these to the Faculty of Medicine. Its members, with the exception of the President and the Dean, are elected by the several divisions.

During the year the Faculty of Medicine has undertaken the administration of a new degree, Doctor of Public Health. A year ago the establishment of a new department of Preventive Medicine and Hygiene in the Medical School was announced. This department was organized in October of this year under the direction of Professor M. J. Rosenau, the former Director of the Hygienic Laboratory of the United States Public Health and Marine Hospital Service at Washington. An almost natural sequence to this was the determination to undertake the special training at Harvard of men for public health work, and so the degree of Doctor of Public Health has been offered under the following conditions:

1. The degree shall be known as " Doctor of Public Health " (D.P.H.).
2. Candidates for the degree of D.P.H. should first have the degree of M.D., or otherwise be properly qualified.
3. Candidates for the degree of D.P.H. shall spend not less than one year in work upon a special subject and present a thesis containing some original research acceptable to the Faculty of Medicine.
4. Candidates for the degree may be given credit for any course offered in any department of the University, provided it has the approval of the Faculty of Medicine.

5. Candidates for the degree may be admitted to advanced standing. A minimum of one year in residence shall be required.
6. The President of the University shall appoint three members from the Committee of Full Professors of the Faculty of Medicine who shall constitute a "Committee on the degree of Doctor of Public Health." It shall be the duty of this Committee to consider all matters pertaining to courses, admission to advanced standing, and other matters concerning the administration of the degree. The Committee on the degree of Doctor of Public Health shall report its recommendations to the Faculty of Medicine.

The Charles F. Farrington bequest for the investigation of infectious and communicable diseases has been augmented by a generous donor, and Dr. S. B. Wolbach, the former Director of the Pathological Laboratory of the Montreal General Hospital, and Lecturer in Histology at McGill University, has been appointed Assistant Professor of Bacteriology to conduct this work.

Dr. W. R. Brinckerhoff, the former Director of the Leprosy Investigation Station (Hawaii) of the United States Public Health and Marine Hospital Service, has been added to the Faculty of Medicine as Assistant Professor of Pathology.

A Director of Scholarships has been appointed for the Medical and Dental Schools. He is to serve on the Scholarship Committee, investigate the claims and needs of students, and act as student adviser on all matters not directly associated with the curriculum. Through him will be administered the greater part of the student loan fund. I believe that such an officer will prove of very great service to students in these two Schools, and that sums of money, large or small, made available to him for gifts or loan, will accomplish great good. Dr. Franklin Dexter, former Associate Professor of Anatomy in the Medical School, who for five years has conducted a somewhat similar work on a smaller scale in the Harvard Dental School, very appropriately has been elected to this office.

A very important event in this year has been the consummation of a close affiliation between the Peter Bent Brigham Hospital and the Harvard Medical School, and the determination of the Hospital Trustees to proceed with the erection of their buildings, for which a large sum of money is now available. The Trustees have appointed as Surgeon-in-Chief of the Hospital Dr. Harvey Cushing of Baltimore, and as Physician-in-Chief, Dr. Henry A. Christian of Boston. Dr. Cushing, who has been Associate Professor of Surgery in the Johns Hopkins University,

has been appointed Professor of Surgery in the Harvard Medical School, and Dr. Christian is already Hersey Professor of the Theory and Practice of Physic. The Peter Bent Brigham Hospital is to be erected on land immediately adjoining the Medical School buildings.

A considerable sum of money has been subscribed for a hospital for the care and investigation of patients suffering from cancer. This hospital will be built on part of the Medical School tract, and will be conducted under the direction of the Cancer Commission of Harvard University. It will serve to widen greatly the scope and effectiveness of the investigations of this Commission.

During January a clinic was opened in the Medical School buildings. In it ambulatory medical and surgical patients are treated daily by a staff of physicians and surgeons, and in it opportunities for clinical teaching are afforded in addition to those already possessed by the Medical School.

In February and June 97 men were recommended to the President and Fellows for degrees: —

Medical School	{	For the degree of M.D. (February)	6	
		“ “ “ <i>cum laude</i> (February)	1	
		“ “ “ (June)	53	
		“ “ “ <i>cum laude</i> (June)	13	73
Dental School	{	For the degree of D.M.D. (February)	6	
		“ “ “ (June)	17	
		“ “ “ <i>cum laude</i> (June)	1	24
		Total		97

HENRY A. CHRISTIAN, *Dean*

THE MEDICAL SCHOOL

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — As Dean of the Medical School I have the honor of presenting my report upon the academic year 1909-10.

The Administrative Board was constituted as follows: Drs. H. A. Christian, C. M. Green, F. B. Harrington, G. G. Sears, F. B. Mallory, J. L. Morse, W. B. Cannon, John Warren, and E. E. Southard.

The Faculty Council was composed of the following: Drs. H. A. Christian, E. H. Bradford, W. T. Councilman, Myles Standish, G. G. Sears, J. L. Bremer (Secretary), and W. B. Cannon.

Buildings and Grounds. —

Building A. — A store room for the janitor's supplies and a dressing room for the scrub women have been provided by dividing one of the basement rooms.

Building B. — One of the dissecting rooms has been equipped with a cooling apparatus for summer dissection, and a moderately cold room next door has been fitted up for keeping anatomical material during the summer months. A large tank has been installed in this room for the use of the Engineering Department in Cambridge in making tests of the brine plant. An unequipped room in the Department of Comparative Anatomy has been fitted up for technical work by students. Another room has been equipped as an office and teaching room for the Department of Otology. A closet for rubbish has been built at the back door.

Building C. — A similar rubbish closet has been set up.

Building D. — The ground floor of the wing toward Longwood Avenue has been fitted up as an out-patient clinic. These rooms previously had been used chiefly as store rooms for the departments occupying this building. As a result of the change other quarters were provided for the departments elsewhere in the same building, and also in Building B.

Building E. — A large sum was spent in rearranging and equipping the laboratories for the new Department of Preventive Medicine and Hygiene. The library in this building has been completed and extended by adding new shelves.

Beyond the usual upkeep nothing especial has been done to the grounds.

Libraries. — The usefulness of the various libraries of the School has steadily increased owing to the growth of the same, but still more to their accessibility. Beginning this summer the library in Building E has been opened to the students, and there is now a librarian in each of the four laboratory buildings. The accessions to the libraries numbered 805, of which 198 were books and 317 bound periodicals, acquired by purchase, and 290 were volumes received as gifts. The total number of volumes in the libraries of the School now reaches 16,228, and in addition there are 32,994 pamphlets. The library of the Dental School contains 1,528 volumes. During the year the actual use of the library has grown, and now that all the libraries are open to students they will be of more service than ever before. Comparatively few take books away from the libraries, so that the 2,585 volumes drawn out show only to a slight degree the important rôle the libraries play in the School.

Anatomy. — The work in the Department has been much as usual. The popularity of the fourth-year dissecting course seems to show the feeling of the students that they need more Anatomy, and Professor Dwight considers the first-year course too brief to adequately cover the necessary instruction. Professor Dwight has continued to give much attention to variations, and has been able to add some valuable specimens to the Museum. There is one of a secondary cuboid bone of the foot quite distinct, which has been observed only once before. The collection of Roentgen rays of hands and feet is increasing rapidly. It not only offers an opportunity for comparing variations of the bones with their skiagraphs, but in themselves the plates give opportunity for original research. Assistant Professor Warren has carried his studies of the paraphysis through reptiles, and is about to pursue them among mammals. Professor Dwight, through the kindness of Dr. Whitney, the Curator, has made considerable progress in arranging the specimens of normal anatomy in the Museum.

Comparative Anatomy. — A plan has been drawn up for a series of permanent anatomical preparations for the use of students, and the making of the preparations has been begun. This new collection will considerably increase the effectiveness of the class work in histology and embryology. The collection of wax models, illustrating the anatomy of human and other

vertebrate embryos, is rapidly becoming important. Not only have many models been made by members of the staff, but also a number of valuable ones by students doing special work under the direction of their instructors. The models are so numerous that a catalogue of them must be prepared. To the embryological collection 82 series have been added, making the total number 1,679. Most of the new series are of reptilian embryos. The collection of the snake (*Eutaenia*) and of the turtle (*Chrysemys*) is practically complete. The number of series added is less than usual, because much of the technician's time has been devoted to making series of chick and pig embryos for class use. The amount of research work has been larger than ever before. Publications issued have been recorded in the *Gazette*. Special mention may be made, however, of the completion of Dr. Scammon's plates of the development of the dog-fish, and of the publication of the second edition of Dr. Minot's *Laboratory Text-book of Embryology*.

Physiology. — The instruction has been distinctly improved by separating during the first month the medical and dental students. The dental students, who have not had the preliminary training possessed by the students of medicine, have thus been enabled, with Dr. E. G. Martin's instruction, to enter the subject with less abruptness than in the past. The students of medicine, on the other hand, have not been compelled to listen to some elementary explanations which were necessary when the two classes started the study together. The experiment has proved especially acceptable to members of the Dental School, and will probably be extended in the present academic year. By Dr. J. B. Ayer's voluntary assistance the teaching of certain clinical aspects of physiological processes and methods has been emphasized. Through careful organization the period of required work has been reduced about forty hours.

The investigations of Mr. R. G. Hoskins on the relations of the endosecretory glands have resulted in three papers, one of which is already published. Dr. E. G. Martin has continued his work on the standardization of electrical stimuli, and has published one communication. Dr. E. B. Meigs has finished and printed a study of influences affecting muscle rigor. Dr. Joseph H. Pratt has completed and published an inquiry into the potency of digitalis preparations. An investigation of conditions affecting the irritability of the central nervous system has been started by Mr. E. L. Porter, and is now in progress.

States affecting the inhibitory process in spinal reflexes have been studied experimentally by Mr. Alexander Forbes. Professor Cannon has continued his investigations of the relation of tonus to the activity of smooth muscle, and has begun a research on the effects of anemia on peripheral nerve cells. With Mr. Clarence W. Lieb he has studied the functions of the extrinsic innervation of the gastro-intestinal tract. In January Professor Cannon published a manual for laboratory workers in physiology.

The first candidate to receive the Ph.D. degree in physiology, Mr. R. G. Hoskins, was graduated in June.

Comparative Physiology. — Professor Porter and his associates have investigated problems of the physiology of muscle, circulation, and the bulbar nerve centres.

Biological Chemistry. — Considerable activity has been shown during the past year in investigation, and a number of papers have been published. Professor Folin has completed studies on the influence of saccharin on nutrition, and the preparation of cystin, and of kreatinin from the urine. Professor Folin with Dr. Denis has studied the preparation of kreatinin from kreatin, and with Dr. Wentworth has published "A New Method for the Determination of Fat and Fatty Acids in Faeces." Assistant Professor Henderson has finished six studies concerning the relations of acids and alkalis in various body fluids, and, with Mr. Alexander Forbes, published "A New Method of the Estimation of Acidity and Alkalinity with Dinitro-hydrochinon." Mr. Bloor has investigated carbohydrate esters with the higher fatty acids, and a method for the determination of saccharin in urine. Dr. Denis has also completed a method of determination of total sulphur in urine, and of the amid nitrogen in proteins. With Messrs. Farmer, Macallum and Pettibone Professor Folin has been studying the application of a new principle for the determination of total nitrogen, ammonia, and urea in urine. Dr. Goodall has studied the available methods of testing for bile pigments in urine and stomach contents. Dr. Peters has worked out a new method for the preparation of nucleic acid from different glands.

Bacteriology. — The most interesting event in connection with this Department during the past year is the appointment of Dr. S. B. Wolbach as Assistant Professor of Bacteriology, and the gift of money sufficient to support the action without additional expense to the School.

Professor Ernst has made a series of photomicrographs of trypanosomes and spirochaetes from material in the hands of Dr. Tobey; the Department collection received from this source an addition of some one hundred and sixty lantern slides made up of eleven varieties of trypanosomes and five spirochaetes. Dr. Langdon Frothingham has published papers on rabies and epizootic lymphangitis (with Drs. C. G. Page and J. B. Paige), and has been studying an organism which causes symptoms in guinea-pigs, and probably some other animals, resembling rabies. He has made investigations regarding the vitality of the anthrax bacillus in dry blood smears, a practical laboratory method of diagnosis of anthrax, and the vitality of the glanders bacillus at low temperatures. Dr. E. N. Tobey has published papers on the study of tropical medicine, and on trypanosomes. Dr. Cleaveland Floyd has continued his studies of acid-fast organisms, and a method of immunizing guinea-pigs to tuberculosis by them; he has also investigated pleural infection with the experimental production of pleurisy, pleurisy with effusion and empyema.

Pathology. — There have been three resignations from the Department during the past year, — Dr. F. P. Gay, Instructor in Pathology under the Phillips Fund, whose work was in serum reactions and immunity, has accepted the position of Professor of Pathology in the University of California. While in the Department Dr. Gay rendered valuable service and published a number of researches, some of which were in collaboration with his students, on various subjects in immunity. Dr. L. J. Rhea, Instructor in Pathology, has accepted the position of Director of the Pathological Laboratory of the Montreal General Hospital, and Instructor in Pathology in McGill University, Montreal. Dr. Rhea is an unusual teacher, having a rare gift of simple description and ability to inspire enthusiasm in the students. While in the Department, Dr. Rhea published a number of researches. Dr. S. R. Haythorn, Assistant in Pathology and Pathologist to the Long Island Hospital, has accepted the position of Instructor in Pathology in the Pittsburg Medical School. Dr. W. R. Brinckerhoff, formerly Director of the Leprosy Investigation Station at Molokai, has been appointed Assistant Professor of Pathology under the Phillips Fund. Drs. C. B. Faunce and H. Barkan were appointed Fellows in Pathology, and on the resignation of Dr. Haythorn, Dr. Barkan has been made Pathologist to the Long Island Hospital.

The photographic work of the Department, which has proven of great value to all departments of the School and which it seemed necessary to close owing to lack of funds, may be continued. The fourth-year elective courses in Pathology, which are given in the laboratories of the Massachusetts General Hospital and the Boston City Hospital, have been taken to so great an extent as to tax the teaching resources of these institutions.

At the Boston City Hospital Associate Professor Mallory has continued his work in the preparation of a text-book of pathological histology, and in addition has published several researches, the most important being a study of the changes in the liver in passive congestion. In this, entirely new views of the pathology of the process were demonstrated. At the Massachusetts General Hospital, Assistant Professor Wright has continued his studies of the blood platelets, and has devised methods by which the number of these elements in the blood can be more easily determined. Dr. Wright has also continued his studies on tumors. There have been a number of other researches published from this laboratory. Assistant Professor Tyzzer, in addition to acting as director of the laboratory of the Harvard Cancer Commission, has offered an elective course in protozoölogy which was taken by two students.

Comparative Pathology. — The research work outlined in the preceding report has been continued but not concluded. During the year seven papers have been published, and six are now in press to appear within the calendar year. The published papers represent results of investigations on bacteriological, pathological, and parasitological subjects by Professor T. Smith, Drs. E. L. Walker, M. Fabyan, P. A. Lewis, and F. H. McCrudden.

Neuropathology. — During the year 1909-10 Neuropathology became a separate department of the curriculum, distinct from Pathology, in connection with which, however, the second-year teaching will be carried on. The Department now occupies six rooms on the second floor in one wing of Building D. One room is equipped for work on the Wassermann test; one contains the large brain microtome (the Wyman gift); two are employed for other technical work; one room is a store room, and one contains the loan collection of specimens and serves as the Professor's office.

Two collections of papers have been brought out under the Department's direction and in large measure with the aid of assistants in the Department — Report of Epidemic of Bacillary

Dysentery at the Danvers State Hospital, 1908 (140-page reprint); and Danvers State Hospital laboratory papers, Charles Whitney Page Series, 1910 (313-page reprint). Some time has been given to the stimulation of scientific activity in the State hospitals for the insane in Professor Southard's capacity as Pathologist to the State Board of Insanity. Time has also been devoted to the perfecting of the laboratory plans in connection with the new psychopathic hospital which is to be erected by the Commonwealth on Fenwood Road. The organization of the laboratory has been greatly aided by the efforts of Dr. Emma W. Mooers, who came to us from Munich where she held the position of *Wissenschaftliche Assistentin* in the psychiatric clinic of the University.

The theoretical work of the Department, aside from the publications mentioned above, has consisted in putting together the results of several years' work on encephalitis in the form of a chapter in Osler's "Modern Medicine," in a number of casuistic publications (listed in the *Gazette*), in work on the accuracy of diagnosis in mental disease, and in the demonstration of certain lesions found in connection with dementia praecox. This latter work will be a main topic of the coming year.

Preventive Medicine and Hygiene.—As this was the first year of the existence of this Department much time was required to install the equipment and organize the work. The required course for the second-year class consisted in lectures, demonstrations, and sanitary excursions. A course was given also to two students of the fourth-year class, consisting mainly of laboratory exercises. Five special students were given instruction. Dr. F. M. Allen was appointed Charles Follen Folsom Teaching Fellow in Hygiene, and is working upon metabolism in relation to infection. Drs. A. I. Kendall and W. P. Lucas, and Mr. H. L. Amoss have been engaged in work upon intestinal bacteria and dysentery. Experiments upon the standardization of disinfectants have been undertaken by Drs. Kendall and Edwards. The work upon several of these subjects will shortly be published. Major Tenney, U. S. A., worked upon the presence of typhoid bacilli in sputum, the results of which will be published shortly. Professor Rosenau has started some investigations upon poisons in the expired air, and other subjects. The members of the Department have taken an active interest in extramural agencies of a public health character, such as the Milk and Baby Hygiene Association, the Committee of the Chamber of Commerce upon

the Prevention of Disease and Accidents, the Legislative Committee on the Inspection of Milk, the Federal Pellagra Commission, the Pittsburg Typhoid Fever Commission, the Health-Education League, the Association for the Prevention of Blindness, and other organizations. This Department has also coöperated with the State Board of Health in its investigations upon infantile paralysis.

The Department has taken a special interest in the conception and development of the degree of Doctor of Public Health which is now offered by the Faculty of Medicine.

Pharmacology. — Dr. Louis Nelson worked on the active principle of the castor bean; Dr. D. H. Williams studied the effects of ononin, said to have diuretic properties, on animals, but in the work done no diuresis was noted. Dr. Hartwell conducted a series of experiments on artificial circulation in isolated livers.

A fourth-year elective course in experimental pharmacology was given for the first time.

Theory and Practice of Physic. — The plan of the instruction given by the Department has remained as described in the previous report. Dr. R. M. Smith has assisted Dr. Palfrey in the fourth-year elective course which the latter conducts at the Massachusetts General Hospital. Dr. Joslin has continued in association with Dr. Benedict in investigations on the metabolism of diabetic patients conducted in the Carnegie Nutrition Laboratory. In the laboratory of the Department Professor Christian completed an experimental study of relapsing fever; Drs. R. M. Smith and I. C. Walker, in association with Professor Christian, studied experimental cardiac and renal disease, and several papers describing lesions of the pericardium, endocardium, myocardium, and kidney have been completed. Drs. Pratt and Spooner finished several experimental studies of pancreatic function. Dr. Talbot continued his investigations of metabolism in infants, and Dr. Channing Frothingham, Jr., partially completed a study of human and experimental arteriosclerosis, and in conjunction with Mr. R. S. Austin, a fourth-year student, completed a work on human and animal typhoid agglutinins.

Clinical Medicine. — The periodical meetings of all engaged in the work of the Department spoken of in the last annual report have been continued, and have been found very helpful. The fourth-year elective course has been amplified in the past year by Dr. F. W. White giving a systematic course one afternoon

a week on diseases of metabolism, illustrated by appropriate cases, and Dr. Gerald Blake taking the class every week to the Long Island Hospital, — a perfect museum of chronic disease. Dr. Locke has continued his instruction at the Boston Tuberculosis Hospital. A full list of the publications and investigations of members of the Department is a long one, and has already been published in the *Gazette*. Special mention should, however, be made of Dr. F. T. Lord's very important work on actinomycosis. He has apparently conclusively shown that actinomycetes are so common, alike in carious teeth and in the crypts in enlarged tonsils, as to suggest a causal relation. They are also found on coated tongues and non-carious teeth in persons free from actinomycosis. It would seem that the disease arises from infection of the individual from within, not, as has been hitherto believed, from without. Assistant Professor Cabot delivered the Oration in Medicine before the American Medical Association in Chicago, has a work in press on Differential Diagnosis, and is carrying on researches on the phonographic reproduction of heart and lung sounds, and on the diagnosis of renal function by means of phenolsulphonephthalein, the latter in conjunction with Dr. Hugh Cabot. Dr. J. M. Jackson has published a valuable paper on Graves Disease.

Pediatrics. — The number of graduates who have applied for instruction in the Department has been found to have so materially increased that especial attention has been given to the fostering of the graduate teaching. This has been done by arranging additional courses, thus enabling the graduate to obtain work at any time and in a variety of subjects. Arrangements were made during the past summer so that an opportunity was given to a student to occupy his entire time in the pediatric courses if he so desired. Great advance has been made in the value of the teaching in the contagious wards of the Boston City Hospital since Dr. Place has become a member of the Department. The students now receive exceptional opportunities for studying diphtheria, measles, and scarlet fever.

At different times during the year Professor Rotch has presented papers in the South, at Columbia, Augusta, and Charleston, and also at Indianapolis, on the results of his studies of the epiphyseal development in early life. He has also been engaged, in conjunction with Dr. Harold Smith, by request of the Secretary of the Navy, in studying the epiphyseal development of the cadets at Annapolis in reference to their classification as to fitness for

their work. Assistant Professor Morse has written, among other papers, on infection of the urine and the urinary tract by bacillus coli in infants, and on a study of the value of Brudzinski's neck sign and the contralateral reflex in the diagnosis of meningitis in infants and children. Dr. Ladd has written a paper on substitute feeding in premature infants, and an article for the Hand-book of Treatment by Musser and Kelly, on the Dietetics of Infancy. Dr. Dunn has continued his work of superintending the distribution and use of the Flexner serum throughout New England. He has written, among other papers, an article on cerebrospinal meningitis in Hare's "Modern Treatment." Dr. Bowditch has written on the caloric estimation of infant feeding. Dr. Lucas has been doing much investigation, especially in connection with acute anterior poliomyelitis, and among other papers has written one in conjunction with Dr. Floyd on leucocytic extract and its action on the course of pneumonia. Dr. Sylvester has been carrying on an investigation of the state of the teeth and their relation to the general condition of the children at the Convalescent Home at Wellesley.

Surgery. — The work of the Department of Surgery was carried on throughout the school year with no very noticeable changes, with the exception of a rearrangement of the hours of teaching necessitated by the illness and death of Professor Burrell.

In the laboratories of Surgical Pathology and of Surgical Research a number of investigations were carried on. Among others, Dr. Barney investigated hydronephrosis; Professor Bradford, bone and joint transplantation; Dr. Homans, metabolism of hypophysectomized animals; Dr. Lahey, hernia; Drs. Lucas and Osgood, tendon transplantation; Dr. Quinby, intra-tracheal insufflation; Dr. Robinson, surgery of the lung. Drs. Osgood and Lucas have been engaged in a study of the lesions of anterior poliomyelitis in monkeys.

During the year Dr. John Homans was appointed as the representative of the Laboratory Council in immediate charge of the laboratory. Dr. Homans further prepared himself for this position by qualifying to practice veterinary medicine in Massachusetts.

By generous gifts from the friends of the laboratory the expenses of administration and cost of special pieces of research have been met.

In August, 1910, an animal farm was established under the control of the Council of the Laboratory of Surgical Research,

with Dr. J. C. Hubbard acting as its representative. This farm is situated in Watertown, and has accommodations for boarding dogs and cats and breeding smaller animals. It is the expectation of the Department that the different laboratories of the School will be able to obtain animals from this source at less expense and with greater certainty than under existing conditions.

During the year, twenty-four papers on surgical subjects were published by teachers in the Department of Surgery.

Orthopedic Surgery. — There has been special investigation done under the direction of the Department in regard to infantile paralysis, and bone transplantation. The work on infantile paralysis has been under the personal direction of Dr. Osgood, aided by members of the Bacteriological and Pathological Departments; the work on bone transference has been done by Assistant Professor Nichols and Dr. Soutter. The whole Department issued a report on the treatment of infantile paralysis, which has been considered by the State Board of Health of sufficient importance to distribute reprints to the practitioners of the State.

Dermatology. — Considerable histological work has been done by the Department during the year, the added facilities at the Medical School having made progress in this line much easier. An artist has been trained to make wax models of skin affections, which will be of value in teaching taken in connection with the models already in the Museum.

Otology. — The investigations previously reported have been continued and, in addition, a study has been made of the value of lumbar puncture in cases of auditory vertigo. In connection with the latter, Dr. D. H. Walker has undertaken a study of the function of the ductus endolymphaticus. A room in Building B of the Medical School group has been fitted for the uses of the Department in connection with research and teaching work, and a reference library of journals and reprints has been assembled in it.

Laryngology. — No radical changes in the methods of instruction in Laryngology were made during the past year. In the third year the difficulty of giving each man in the class, which was rather larger than usual, satisfactory opportunity for clinical practice and instruction was met as in the past by the large clinics of three institutions, the Massachusetts General Hospital, the Boston City Hospital, and the Boston Dispensary. In addi-

tion to the didactic course of lectures, courses of three lectures each were given to the whole class on special pathology and anatomy, and on certain dental subjects, by Drs. Goodale, Mosher, and Wright. The fourth-year elective courses, each continuing every morning for two months, have been well filled. To the purely clinical work are added as far as possible various demonstrations and special study of selected subjects.

Neurology. — In addition to the phases of department work already reported previously Professor Putnam has devoted attention in recent years to teaching clinical psychology and psychotherapy as a part of his exercises given during the second half-year.

The Warren Anatomical Museum. — A bulletin of the collection, the publication of which was rendered possible by a generous gift from Miss Rebecca Warren Brown, has been completed during the past year. It is an octavo volume of sixty-eight pages, with thirty illustrations from specimens in the collection, and describes chiefly pathological conditions of the bones, joints, tendons, and bursae. As these are parts of the body of especial interest to the orthopedic surgeon, the bulletin will be used as an adjunct to the teaching in that Department. Copies have been sent to the leading medical libraries of the world, to museums, and to individuals interested in the subject. In the spring a circular letter was sent to the head of each Department of the School, asking him to indicate in what way the Museum could be of the greatest use as an aid to his teaching. It is hoped that valuable suggestions will be made, and as far as its resources will permit, the Museum will try to carry them out, and give its hearty coöperation. Professor Dwight has devoted much time to the completion of the arrangement of the anatomical part of the collection, and additional cases have been placed at his disposal by a rearrangement of the specimens in the upper gallery.

Several new methods for the preservation of the natural colors in specimens have been tried, but with only limited success so far. As yet, it seems largely a matter of luck, as some specimens will hold their colors, while others done in apparently the same way will not. Work in this line will be continued in the future. A valuable dissected preparation was presented by Dr. Souchon, of New Orleans, in which the color of the muscles is well preserved, against which the injected vessels stand out with remarkably good effect. His method, however, requires a perfectly

fresh subject for a successful result. The Boston City Hospital has contributed a number of specimens of diseases of the heart and brain; and from the Massachusetts General Hospital many of surgical interest have been received.

The number of outside visitors increases every year, among whom have been noticed many school teachers. Persons from foreign countries have likewise shown great interest, and some have spent much time in studying the specimens. The Museum has again been kept open during the vacation for the benefit of the students of the Summer School.

Proctor Fund for the Study of Chronic Diseases. — During the year appropriations were made from this fund to Dr. Pratt for experimental work on pancreatic disease; to Dr. R. M. Smith for the study of experimental nephritis; to Dr. I. C. Walker for the study of experimental cardiac disease; to Dr. Osgood for experimental investigation of poliomyelitis; to Dr. Tyzzer for the purchase of monkeys to be used in the investigation of Yaws; to Dr. Lucas for a study of coagulation of the blood in relation to certain diseases, and to Dr. Lord for an investigation of organisms causing actinomycosis. As a result of these grants a number of investigations have been completed and published, and this year the usefulness of such a fund of money for the encouragement of the study of chronic diseases has been manifest.

The Cancer Commission of Harvard University. — The work of the Cancer Commission, supported chiefly by the Caroline Brewer Croft Fund, has been carried on actively during the year 1909-10. The Fifth Report of the Commission noted in this report last year was reprinted and issued in the fall of 1909. Since the publication of that report work has been carried on under the direction of Assistant Professor Tyzzer on the inoculable tumors of mice. A special study has also been made by Dr. E. H. Risley, acting under Dr. Tyzzer, and with the coöperation of the staff and the trustees of the Massachusetts General Hospital, upon the experimental treatment of inoperable cancer in human beings by the serum of recovered or resistant cases.

A public meeting was organized at the Medical School by the Cancer Commission on April 13, 1910, at which addresses were made by Dr. J. Collins Warren (Chairman), Dr. W. T. Councilman, President Charles W. Eliot, and Hon. F. P. Fish. The purpose of this meeting was to arouse the interest of the public in the establishment of a cancer hospital to be under the control

of the Commission, and the response of the public to this appeal has been gratifying, and plans are nearly completed for the construction of a hospital of twenty-five beds to be built on the Medical School grounds.

Alumni Fund.—The alumni of the Medical School have again added to their endowment fund, and have contributed \$1,500 to pay the salaries in 1909-10 of three alumni assistants who devote a large part of their time to instruction in clinical subjects. This gift each year has proved its usefulness, and the Medical School gratefully acknowledges this form of alumni interest.

Clinic in the Harvard Medical School.—January 10th a clinic for the treatment of ambulatory cases of disease was opened in the Medical School buildings. The clinic occupies convenient and commodious quarters in Building D adjacent to Longwood Avenue. Patients are received at 3.30 in the afternoon. Physicians and surgeons, an orderly and a nurse are in attendance daily. During the first eight months of its operation the clinic has had 2,153 visits from patients for treatment. Of these 858 were visits for the first time or new patients. In the first months only a medical and a surgical clinic were maintained. Recently the work has been extended by the addition of departments for the special treatment of diseases of the nose, throat, and ear. The committee in charge of the clinic feels that this new extension of the Medical School work has been a success, and has fully justified itself.

Scholarships and Fellowships. — The scholarships and fellowships were awarded as follows: —

Barringer Scholarship, No. 1,	H. O. Peterson,	3d Class.
“ “ No. 2,	G. B. Corcoran, A.B.,	4th “
Joseph Pearson Oliver Scholarship,	C. A. Hedblom, A.M.,	3d “
David Williams Cheever “	E. T. Wentworth, A.B.,	1st “
Isaac Sweetser “	P. W. Emerson, A.B.,	3d “
Claudius M. Jones “	H. H. Crabtree, A.B.,	3d “
Charles B. Porter “	W. G. Smillie, A.B.,	2d “
Edward Wigglesworth “	P. J. Look, A.B.,	2d “
Alfred Hosmer Linder “	F. P. Gaunt, A.B.,	3d “
John Thomson Taylor “	J. A. Bacher, A.B.,	3d “
Charles Pratt Strong “	L. T. Nelson, A.B.,	3d “
Lewis and Harriet Hayden “ (½)	R. Birnie, Jr., S.B.,	3d “
“ “ “ “ “	A. B. Terrell, S.B.,	4th “
Orlando W. Doe “	H. E. Perry, A.B.,	3d “
Hilton “ (½)	L. H. Bauer, A.B.,	2d “
“ “ “	I. Perlstein,	2d “
“ “ “	A. M. Dunlap, A.B.,	4th “
“ “ “	L. W. Bortree, A.B.,	4th “
Eveleth “	H. J. Cronin,	3d “
“ “	H. T. Chickering, A.B.,	3d “
“ “	C. L. McCrossan, A.B.,	4th “
Lucius F. Billings “ (½)	P. J. Dulligan, A.B.,	3d “
“ “ “ “ “	C. G. Rounsefell, A.B.,	2d “
Cotting Gift,	K. I. Balcom, A.B.,	4th “
John Foster Fund,	F. R. Clark, A.B.,	3d “
James Jackson Cabot Fund,	L. W. Hackett, A.B.,	2d “
James Ewing Mears Scholarship	C. W. Lieb, A.M.,	1st “

The George Cheyne Shattuck Memorial Fellowship was awarded Samuel Robinson, A.B., M.D., for work on two problems: (1) The study of problems associated with changing the blood supply to the lung; (2) The perfection of a method of excision of one lung in the dog.

The Charles Eliot Ware Memorial Fellowship was awarded Eugene S. Kilgore, S. B., M.D., for an effort to devise and use, (1) a sound-registering instrument which shall be suitable for physiological and clinical experimental purposes; and (2) a system of pressure registering devices to write records synchronous with the record of sounds.

The John Ware Memorial Fellowship was awarded Channing Frothingham, Jr., A.B., M.D., for the experimental study of arteriosclerosis.

Statistics. — The statistics of the School will be found in the following tables: —

FINAL EXAMINATIONS

	1906			1907			1908			1909			1910		
	Passed	Failed	Total	% Passed	Failed	Total	% Passed	Failed	Total	% Passed	Failed	Total	% Passed	Failed	Total
FIRST CLASS :—															
Comparative Anatomy	66	6	72	8	10	82	12	79	7	86	8	51	3	54	6
Biological Chemistry	60	7	67	10	11	74	15	64	15	79	19	47	17	64	9
Anatomy	57	8	65	12	13	75	17	65	16	81	20	54	9	63	3
Physiology	69	17	86	18	11	88	12	77	16	93	17	56	13	69	22
SECOND CLASS :—															
Pathological Anatomy	60	7	67	10	4	65	6	66	13	79	16	84	12	96	6
Bacteriology	61	6	67	9	15	69	22	62	22	84	26	81	12	93	4
Hygiene	69	4	73	5	17	68	25	73	5	78	6	87	3	90	6
THIRD CLASS :—															
Theory and Practice	72	1	73	1	1	66	1	60	6	66	9	60	7	67	3
Surgery	60	2	62	3	1	65	1	62	3	65	5	68	1	69	0
Obstetrics	65	4	69	6	7	67	10	58	9	67	13	69	16	85	10
Pediatrics	68	3	71	4	69	0	67	0	67	0	67	0	75	0	93
Dermatology	68	4	72	5	3	68	4	61	8	69	12	70	7	77	3
Gynaecology	61	9	70	13	0	65	0	57	10	67	15	72	5	77	2
Neurology	68	6	74	9	5	67	7	66	4	70	6	74	2	76	7
Therapeutics	48	28	76	37	16	75	21	59	13	72	18	68	14	82	12
Clinical Medicine	70	6	76	8	7	69	10	63	7	70	10	75	5	80	3
Clinical Surgery	72	0	72	0	63	0	63	0	61	0	61	0	73	0	90
Syphilis	70	0	70	0	66	0	66	0	64	4	68	6	78	0	91
Ophthalmology	69	6	75	8	71	2	73	3	59	7	66	10	69	11	93
Otology	64	5	69	8	1	66	1	64	3	67	5	74	0	80	2
Laryngology	69	0	69	0	64	2	66	3	66	2	68	3	72	1	93
Psychiatry	70	3	73	4	0	66	0	65	3	68	4	73	2	75	0

FOURTH CLASS. — ELECTIVES :*

	36	0	36	0	40	0	40	0	49	0	49	0	33	1	34	3	30	1	31	1
Anatomy	36	0	36	0	40	0	40	0	49	0	49	0	33	1	34	3	30	1	31	1
Comparative Anatomy . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Embryology . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Physiology . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Comparative Physiology . . . . .	..	..	..	..	1	0	1	0	10	0	10	0	2	..	..	..	..	..	..	..
Biochemistry . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Bacteriology . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pathology	3	0	3	0	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Comparative Pathology	15	0	15	0	6	0	6	0	14	0	14	0	30	0	30	0	32	0	32	0
Protozoology . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Neuropathology . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Preventive Medicine and Hygiene	5	0	5	0	2	0	2	0	..	..	..	..	..	..	..	..	..	..	..	..
Pharmacology	4	0	4	0	6	0	6	0	1	0	1	0	0	0	0	0	3	0	3	0
Theory and Practice . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Pediatrics	70	1	71	1	66	0	66	0	83	1	84	1	49	1	50	2	111	0	111	0
Clinical Surgical Pathology	28	0	28	0	28	0	28	0	45	0	45	0	46	0	46	0	59	0	59	0
Roentgen Ray	63	0	63	0	65	0	65	0	70	0	70	0	47	0	47	0	72	0	72	0
Surgery	8	0	8	0	6	0	6	0	2	0	2	0	0	0	0	0	1	0	1	0
Genito-Urinary Surgery . . . . .	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Orthopedics	66	0	66	0	66	0	66	0	102	0	102	0	58	1	59	2	94	0	94	0
Surgical Pathology	35	0	35	0	17	0	17	0	6	0	6	0	3	0	3	0	1	0	1	0
Obstetrics	3	0	3	0	2	0	2	0	19	0	19	0	21	0	21	0	17	0	17	0
Gynecology	39	0	39	0	59	0	59	0	2	0	2	0	0	0	0	0	1	0	1	0
Dermatology and Syphilis	28	0	28	0	20	0	20	0	58	0	58	0	50	1	51	2	58	0	58	0
Neurology and Psychiatry	13	0	13	0	8	0	8	0	25	0	25	0	24	0	24	0	24	0	24	0
Ophthalmology	14	0	14	0	19	0	19	0	3	0	3	0	8	0	8	0	1	0	1	0
Otology	3	0	3	0	1	0	1	0	28	0	28	0	11	0	11	0	22	0	22	0
Laryngology . . . . .	..	..	..	..	1	0	1	0	9	0	9	0	1	0	1	0	3	0	3	0
	8	0	8	0	8	0	8	0	7	0	7	0	2	0	2	0	2	0	2	0
	..	..	..	..	..	..	..	..	16	0	16	0	11	0	11	0	13	0	13	0

* In the table of electives, not the total number of students taking electives are enumerated, but the number of courses elected. Each course represents the work of one student for a period of one month. Eight electives constitute the work of the fourth year, but a student may take more than one month's work in a single subject. This system of fourth-year work went into effect in 1906.

GENERAL STATISTICS OF THE SCHOOL

New matriculants 65

The number of students in attendance:—

Fourth Class 72

Third Class 79

Second Class 56

First Class 60

Special Students 12

Total 279

Applicants for Degree (February) 7

Applicants for Degree (June) 68

75

Rejected 2

Graduated 73

Of the 73 students who received the degree of Doctor of Medicine, 14 received the degree *cum laude*.

	SUMMER COURSES					GRADUATE COURSES				
	1906	1907	1908	1909	1910	1905-06	1906-07	1907-08	1908-09	1909-10
Courses taken	306	281½	178	291*	299	104	93½	125	123	151
Students . .	192	194	136	210	197	77	68	81	111	111
Receipts . .	\$8793	\$8501.50	\$4886.50	\$8729.50	\$8622	\$2663	\$2141	\$2932.50	\$3187	\$3605.77

* In 60 of these courses only a fraction of exercises were taken.

Students in courses of the regular curriculum 279

Students in Graduate courses 111

Students in Summer courses 197

Total students, October 1, 1909, to October 1, 1910 . . 587

HENRY A. CHRISTIAN, *Dean*.

THE DENTAL SCHOOL

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — I herewith hand you my report on the Dental School for the academic year 1909–10.

The delay on the part of the contractors in finishing the new building of the Dental School was the cause of a month's delay in the opening of the various clinics. We were able, however, to use the building for the registration of students on Registration Day, and to begin exercises at once in the Dental lecture rooms and laboratories of the Medical School.

The enrolment of students was as follows: —

Third-year students	25
Second-year students	13
First-year students	50
	88

an increase of twenty students over that of 1907–08. This increase of numbers was especially gratifying inasmuch as I had long contended that the environment of our old building was a constant menace to growth.

Instruction was given as follows: —

Anatomy. — Professor T. DWIGHT, Asst. Professor WARREN, Demonstrator CHEEVER, Instructor MOSHER, Assistants FLAGG, ADAMS, BARNEY, HARTWELL, and GREEN. 424 hours.

Comparative Anatomy. — Professor MINOT, Asst. Professor LEWIS, Demonstrator BREMER, Instructors WILLIAMS, SCAMMON, and SHEPARD, Jr., Austin Teaching Fellow JOHNSON. 252 hours.

Physiology. — Professor CANNON, Instructors MARTIN and MEIGS. 348 hours.

Physiological and Dental Chemistry. — Lecturer H. CARLTON SMITH. 302 hours.

Bacteriology. — Professor H. C. ERNST, Instructor FROTHINGHAM, Assistants PAGE, PERRY, WORTHINGTON, EVERETT, and TOBEX, Austin Teaching Fellow FLOYD. 160 hours.

Materia Medica and Therapeutics. — Professor E. C. BRIGGS. 32 hours.

Dental Pathology. — Professor C. A. BRACKETT. 32 hours.

Neurology. — Instructor TAYLOR. 4 hours.

Crown and Bridge Work. — Professor COOKE, Instructors ELDRED, HOVESTADT, and ESTABROOKS. 128 hours.

Orthodontia. — Professor E. H. SMITH, Instructors BAKER and HOWE. 128 hours.

- Orthodontia, Juniors. — Instructor BAKER. 10 hours.
- Prosthetic Dentistry, Juniors. — Asst. Professor CROSS. 32 hours.
- Prosthetic Dentistry, Laboratory, Seniors. — Asst. Professor CROSS, Instructors HAYDEN, HALEY, L. A. ROGERS, CHUTE, CLARKE, WESTON, LANGLEY, Demonstrator KAZANJIAN. 496 hours.
- Prosthetic Dentistry, Laboratory, Juniors. — Asst. Professor CROSS, Instructors DAVIS, DORT, EAMES, FURBISH, Demonstrator KAZANJIAN, Assistants PETERS and BECKFORD. 544 hours.
- Anatomical Articulation, Mechanical Treatment of Fractured Jaws, Cleft Palates, and other Deformities. — Asst. Professor CROSS. 21 hours.
- Extracting and Anaesthesia. — Instructors FARRINGTON, SQUAREBRIGS, STONE, MIDGLEY, GILPATRIC, and NORWOOD. 477 hours.
- Porcelain Inlays and Carving Teeth. — Instructors HADLEY and MOFFATT. 142 hours.
- Oral Surgery and Roentgenology. — Instructor SHUMAN. 6 hours.
- Oral Surgery. — Instructors SHUMAN and L. M. S. MINER. 64 hours.
- Roentgenology. — Assistant CUMMINGS. 126 hours.
- Surgical Pathology and Surgery. — Lecturer MONKS, 12 lectures and demonstrations; Instructor BLAKE, 9 clinics at City Hospital.
- Syphilis. — Instructor C. MORTON SMITH. 6 lectures and clinics.
- Oral Surgery. — Lecturer GEORGE H. WRIGHT. 15 lectures and clinics at Nose and Throat Department, Massachusetts General Hospital.
- Operative Dentistry, Seniors. — Professor POTTER. 32 hours.
- Operative Dentistry, Juniors. — Lecturer DILL. 32 hours.
- Operative Dentistry, Infirmary, Seniors. — Professor SMITH, Instructors LOVELAND, JEWELL, EDDY, BLAISDELL, FURFEY, PAUL, STANLEY, ELLIOTT, and COOPER, and Demonstrator WYMAN. 624 hours.
- Operative Dentistry, Infirmary, Juniors. — Lecturer DILL, Instructors LITTIG, WHITEHILL, PIKE, STEVENS, WHITCHURCH, COOPER, Demonstrator WYMAN, Assistants O. S. SMITH and ESTES.

The work of the School is outlined in the following tables: —

OPERATIVE DEPARTMENT

No. of treatments of teeth and gums	1,116
“ “ “ pyorrhoea alveolaris	72
“ sets of teeth cleaned	702
“ fillings — gold	1,492
“ “ gutta percha	259
“ “ cement	473
“ “ amalgam	2,040
“ “ amalgam and cement	281
“ “ silicate	241
“ patients	1,936
“ operations	6,676

PROSTHETIC DEPARTMENT

SERVICE TO PATIENTS

No. of sets of artificial teeth	145
“ “ “ “ repaired	75
“ partial sets of artificial teeth	87

PRACTICE WORK

No. of specimen plates	107
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ORTHODONTIA

SERVICE TO PATIENTS

No. of patients treated for irregularities of the teeth	51
“ appliances	253
“ models of regulating cases	106

PRACTICE WORK

No. of appliances for irregularities of the teeth	39
“ models for regulating cases	13

CROWN AND BRIDGE WORK

SERVICE TO PATIENTS

No. of crowns and caps	107
“ crowns repaired	15
“ pieces of bridge work	56
“ “ “ repaired	25

PRACTICE WORK

No. of crowns and caps	65
“ bridges	39
“ carved teeth models	19

INLAY WORK

SERVICE TO PATIENTS

No. of porcelain inlays and tips	25
“ gold inlays	26

PRACTICE WORK

No. of porcelain inlays	38
“ gold inlays	20

FRACTURED JAWS

SERVICE TO PATIENTS

No. of cases	34
“ appliances	42

PRACTICE WORK

No. of appliances	13
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ARTIFICIAL PALATES

SERVICE TO PATIENTS

No. of cleft palates	8
“ “ palate appliances	6
“ artificial noses	1
“ nose support	1

SURGICAL DEPARTMENT

No. of patients	1,385
“ cases of epulis	13
“ “ antral necrosis	8
“ “ stomatitis	7
“ “ complete fracture of alveolar process . . .	9
“ “ non-erupted teeth	4
“ “ adenitis	4
“ “ syphilis	5
“ “ alveolar abscess	31
“ “ osteoma	2
“ “ impacted lower third molars	11
“ “ tempero maxillary bursitis	1
“ “ non-union of premaxillary bone	2
“ “ tri-facial neuralgia	6
“ “ necrosis	8
“ “ ankylosis	2
“ “ giant cell sarcoma	4
“ “ fibroma	3
“ “ plastic operation	4
“ “ sub-maxillary abscess	7
“ “ cysts	7
“ “ ununited fractures	2
“ “ secondary hemorrhages	1
“ “ adenoids and tonsils	2
“ “ osteomyelitis	2
“ “ special extractions	1
“ “ operations for malformations	2
“ radiographs	126

SUMMARY

No. of operations in Prosthetic Department	1,161
“ “ Operative Department	6,698
“ “ Surgical Department	3,093
	<hr/>
	10,952

Assistant Professor Harold DeW. Cross conducted a summer course of five weeks in Prosthetic Dentistry which was well attended. Dr. Cross has spoken before several meetings during the past winter on the following subjects: "Anatomical Occlusion" (illustrated); "Correctable Impressions," and "Artificial Palates."

Professor W. H. Potter has continued his good work as a public teacher by delivering twelve lectures before various audiences on "Oral Hygiene, with Especial Reference to Children in the Public Schools."

Dr. Lawrence W. Baker continued his investigations of impaired occlusal relations of the teeth and the bearing upon the general health.

H. Carlton Smith, Lecturer on Dental Chemistry, has continued his investigation of saliva. In conjunction with Charles F. MacDonald, Jr., a senior student, a study was made of the laboratory methods of detecting the oxydizing enzymes in saliva. Their findings were published in the *Journal of the Allied Societies*.

Dr. George H. Wright has made a study of the bones and sutures of the head in their relation to maxillary deformities, and invented an instrument for accurately measuring the intra nasal fossa before and after the spreading of the superior maxillary bones in the treatment of malocclusion. He also read a paper, embodying his findings, before the New England Otological and Laryngological Society and the Northeastern Dental Society.

The stimulus for research work given by the bequest of Mrs. Harriet Lowell has brought about the organization of a Research Department of the School. The committee in charge of the department, appointed by the Administrative Board, is made up as follows:—H. Carlton Smith, Ph.D., Drs. L. M. S. Miner, Lawrence W. Baker, George H. Wright, F. B. Mallory.

Through the courtesy of the Medical School we are using a room in Building D which we have partially equipped for research work. Dr. Miner of this department has continued his work in the investigation of the various scientific problems in Dentistry, and has published two articles, namely, "Research Work in the Harvard Dental School" and "Antagonistic Therapy: Its Laboratory Aspects and Its Application in Septic Processes of the Oral Cavity."

During the winter the School conducted an evening course for graduates and practitioners of repute not holding degrees. The course began February 15 and continued until April 26. The fee was \$15.00. The courses offered were as follows:—

- Artificial Dentures, Fractured Jaws. HAROLD DEW. CROSS, D.M.D.
- Crown and Bridge Work. J. F. HOVESTADT, D.M.D., NED A. STANLEY, D.M.D., W. W. CAPON, D.D.S., University of Pennsylvania.
- The Extracting Room. W. H. POTTER, D.M.D.
- Heart Lesions as Related to the Problem of Anaesthesia. F. W. PALFREY, M.D., Harvard Medical School.
- Inlays. A. I. HADLEY, D.M.D., W. W. CAPON, D.D.S., University of Pennsylvania.
- Helps for the Busy Practitioner. W. D. TRACY, D.D.S., New York, N.Y.
- Laboratory Work. V. H. KAZANJIAN, D.M.D.
- Methods of Opening into the Pulp Cavity and Filling Root Canals. E. C. BLAISDELL, D.M.D.
- Non-Cohesive Gold. E. C. BLAISDELL, D.M.D.
- Nervous and Timid Patients under Dental Operations. E. W. TAYLOR, M.D., Harvard Medical and Dental Schools.
- Oral Hygiene. GEORGE H. WRIGHT, D.M.D.
- Orthodontia. LAWRENCE W. BAKER, D.M.D., and HORACE L. HOWE, D.M.D.
- Prophylaxis and the Treatment of Pyorrhea. N. A. STANLEY, D.M.D.
- Syphilis. C. MORTON SMITH, M.D., Harvard Medical and Dental Schools.
- Tumors of the Jaws. G. H. MONKS, M.D., Harvard Medical and Dental Schools.
- Uric Acid Diathesis. E. P. JOSLIN, M.D., Harvard Medical School.
- Anatomical Articulation. DR. HAROLD DEW. CROSS.

Seventy-eight men and two women attended the course, which was successful in every way.

Under the direction of Dr. Waldo E. Boardman, Curator of the Dental Museum and Librarian, the Museum has been furnished with cabinets and show-cases and the various specimens and collections properly installed. The Museum is most attractive in appearance and is so situated on the second floor of the building as to be easily reached by teachers and students.

Two hundred and fifty-two new volumes were added to the library during the past year, making the total number of bound volumes 1,572. There are 34 volumes yet to be bound. The books have been catalogued during the year.

In the summer vacation of 1900, Joseph Warren Smith, Jr., a student who had completed his junior year in the School, was

drowned. He was a great favorite among his classmates, possessing unusual ability, and gave high hopes for the future. To commemorate his memory his family has given to the School during the past year ten thousand dollars to be known as the Joseph Warren Smith, Jr., Memorial Fund. This sum has already received additions by contributions from some of the members of his class.

In commemoration of this generous gift the Administrative Board has caused to be placed in the entrance hall of the School a bronze tablet suitably inscribed.

It took a considerable part of the year to perfect the working capacity of our building which was not fully completed at the time of its dedication.

The Dedicatory Exercises took place December 7 and 8, 1909, in the form of an academic meeting in Sanders Theatre, presided over by the President of the University. The speakers were: Dr. Francis G. Peabody; Dr. Henry A. Christian, Dean of the Medical School; Dr. G. V. I. Brown, of Iowa; Charles W. Eliot, President Emeritus; Mr. Charles A. Coolidge; President A. Lawrence Lowell; Dr. W. W. Fenn, Dean of the Divinity School; Dr. Eugene H. Smith, Dean of the Dental School. Music was furnished by a chorus made up of graduates and members of the School under the direction of Dr. James A. Reilly.

The building was opened for inspection on December 7 and 8. Tea was served on Tuesday, December 7, from 2 to 5 P.M. and from 8 to 10 P.M., to a large number of visitors.

On the evening of December 8 the Administrative Board of the School gave a subscription dinner to the alumni at the Hotel Somerset, which was largely attended. The Dean of the School presided, and the speakers were: President A. Lawrence Lowell, President Charles W. Eliot, Dr. George H. Monks, Dr. G. V. I. Brown, Dr. Charles A. Brackett (for the Alumni), Dr. W. H. Potter, Dean W. W. Fenn. The Alumni Chorus furnished most excellent music. This dinner brought to a close the exercises and festivities incident to the dedication of our new building, a building modest in appearance, and yet complete in every way for the purpose for which it was built.

The Building Committee was made up of the Dean (Chairman), and Dr. William H. Potter and Dr. William P. Cooke.

As Chairman of the Building Committee, I should like to record here the Committee's indebtedness to Dr. Harold DeW. Cross for his valuable assistance in the planning of the Prosthetic

Laboratory; Dr. Waldo E. Boardman for his valuable help in the planning of the library and museum; and to the members of the teaching staff for their suggestions and aid. A year's use of the building has shown us how complete were the plans, and we enter upon the work of our second year with practically no desire for changing them. For this happy result we owe much to Dr. William P. Cooke, a member of the Building Committee, who, with untiring efforts, early and late, followed every detail of the construction.

EUGENE H. SMITH, *Dean.*

THE LIBRARY

TO THE PRESIDENT OF THE UNIVERSITY:—

SIR, — As Chairman of the Library Council, I beg to submit my report on the Library, covering the fiscal year from August 1, 1909, to July 1, 1910.

The Council has received the annual report of the Librarian, which calls for little comment. He has repeated once more the story of our efforts under somewhat discouraging conditions. The Library is in need of many things and, considerable as are the appropriations already devoted to it by the University, nevertheless it finds difficulty even in keeping up with current work and meeting everyday demands, not to speak of making up arrears and instituting much needed reforms. A recapitulation of the chief tasks to be undertaken may perhaps make the situation clearer.

1. We have now some seventy-five thousand volumes or pamphlets whose titles are not in the public catalogue and which therefore, as far as most of our public is concerned, might as well not be in our possession.
2. We have on our shelves over two hundred thousand volumes either unclassified or in classifications so defective that it has long been an accepted principle that some day totally new ones must be made. Our accessions to these two groups number some five thousand a year. Thus, in spite of the many subjects that have been classified by the Library in the last quarter of a century, we have more volumes still to rearrange than we had when the operation began. And it is very needful to continue. To the steadily increasing number of advanced students and of scholars from outside who have access to our shelves, well classified arrangements of the books to be found there are of untold service.
3. By general consent, our subject catalogue requires radical reforms. It has grown up in the course of fifty years, and much that is now in it could well be left out; much not now there could profitably be inserted. Some fifty thousand cards must have their shelf marks changed,

and the whole system on which the catalogue is based is capable of improvement. But even such a comparatively small improvement as the new group made last summer necessitated the rearrangement of about one hundred and thirty-five thousand cards. The recasting of the whole subject catalogue would be a formidable task, demanding a large expenditure of time and money. We must content ourselves with such gradual ameliorations as we can make under our present circumstances, and we hope soon to report progress, thanks to the increased appropriations for administrative purposes which the Corporation has recently granted.

4. All our questions concerning cataloguing are affected by our problem of card changing. For reasons too long and complicated to be explained in detail here, it is becoming increasingly evident that the Harvard Library should adopt for its catalogue, as soon as possible, the card of standard size now used by the Library of Congress and by the great majority of other libraries of the United States as well as in Great Britain, Germany, and elsewhere. This is not only a matter of convenience, as compared with using our own smaller size of card; it also brings so many advantages in the way of coöperation and the acquisition of printed cards from publishers and other libraries that the Yale, Columbia, Princeton, Brown, and the Andover Theological Libraries are all either making the change at the present time or look forward to doing so shortly, in spite of the trouble and expense involved. Every day that we delay means so much more to be done over again. It is our hope, therefore, to be able to begin work very soon on this the most pressing of our immediate tasks.

Above all these questions looms that of the necessity of a new library building. This has been pointed out so often that there is little for me to say on the subject except the obvious truism that every year makes the situation worse. With what is in many ways the finest collection of books in the country, we have the one in every way the worst housed, considering its value. As is well known, the building is far from safe, yet any loss from fire would be irreparable. It is crammed with books from top to bottom, and we have had to store some forty-five thousand of the volumes least called for in the cellars of Perkins, Wal-

ter Hastings, and Robinson Halls, and in the Divinity School, where they still have to be reached somehow or other, for they continue to be in demand. Every year this vexatious and costly operation of sending thousands of our books outside must be continued with increasing discomfort until we get a new building.

None the less, the above difficulties, harassing as they are, should never make us lose sight of the necessity of continuing to build up our collections by every possible means. This is not a thing that can be postponed until we are more comfortably situated. The price of old and rare books is rapidly rising. Complete sets of the publications of academies and learned societies, of archives, monumenta, and other things of the sort, which the Harvard Library ought to possess in as great numbers as possible, are becoming scarce and will soon be unobtainable. Few gifts to the Library would be more useful than a sum that could be devoted to the immediate purchase of as many of these as we can get. There will never be so favorable a time again. The same is true about the building up of collections of old publications, particularly those containing rare pamphlets or early editions. Within a generation, at the present rate, these will fetch prices within the reach only of wealthy private collectors. Every gift that the Harvard Library receives for acquisitions of this sort is as welcome as it is timely. Its own ordinary funds must be devoted to keeping up with current works of importance and those necessary to our students, but it should eagerly grasp at every opportunity to add books of value to its collections, no matter at what temporary inconvenience.

ARCHIBALD CARY COOLIDGE,

Chairman of the Library Council.

APPENDIX TO LIBRARY REPORT

I

ACCESSIONS

The accessions to the libraries of the University for the year, and the present extent of each are shown in the following table: —

ACCESSIONS	Volumes added	Present extent in	
		Volumes	Pamphlets
College Library :—			
Gore Hall Collections	20,616	543,439	374,604
Thirty-two Special Reference Libraries . . .	4,493	58,502	..
Law School	5,490	120,600	13,390
Divinity School	588	38,208	10,799
Medical School	805	16,228	32,994
Dental School	252	1,525	11,000
Bussey Institution	100	4,900	16,300
Museum of Zoölogy	1,269	46,924	43,367
Peabody Museum	194	3,895	3,456
Astronomical Observatory	365	13,229	28,311
Gray Herbarium	818	12,129	9,566
Arnold Arboretum	1,950	22,525	..
Total	36,940		
Deduct, transfers between Gore Hall and Department Libraries	423		
Totals	36,517	882,104	543,787
Total number of volumes and pamphlets in the University Library . . . . .	..	1,425,891	..

The additions to the College Library alone for the last five years have been as follows:—

ADDITIONS TO COLLEGE LIBRARY	1905-06	1906-07	1907-08	1908-09	1909-10
Volumes by purchase or exchange .	11,012	7,520	8,765	9,759	8,577
Do. by binding serials	1,767	1,478	1,699	1,841	1,924
Do. by binding pamphlets	943	852	1,099	1,122	974
Do. by gift	4,350	4,852	7,153	17,939	9,141
Total volumes added	18,072	14,702	18,716	30,661	20,616
Maps in sheets	1,112	512	699	1,131	525
Pamphlets by purchase or exchange	2,829	1,899	2,010	1,820	3,051
Do. by gift	14,404	14,128	14,872	19,611	17,348
Total gifts (vols. and pams.) . . .	18,754	18,980	22,025	37,450	26,489

INCOME AND EXPENDITURE FOR BOOKS

The following table shows the income of the book-funds, receipts from other sources for the purchase of books, and expenditures for books during the last six years:—

INCOME AND EXPENDITURE	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10
From book funds, —						
Balance from previous year .	\$4,074	\$4,781	*\$5,140	\$5,726	\$5,723	\$5,029
Income of the year	19,560	19,063	†20,259	19,773	20,917	19,111
Total available	23,634	23,844	25,399	25,499	26,640	24,140
Spent for books	18,853	19,324	19,673	19,776	21,611	21,977
Balance to next year	4,781	4,520	5,726	5,723	5,029	2,163
Special gifts, sales, etc. —						
Balance from previous year .	1,707	2,814	4,279	3,802	3,321	4,860
Received during the year : .	4,611	9,484	10,115	5,351	7,246	11,948
Total available	6,318	12,298	14,394	9,153	10,567	16,808
Spent for books	3,504	8,019	10,592	5,832	5,707	8,461
Balance to next year	2,814	4,279	3,802	3,321	4,860	8,347
Total spent for books, —						
College Library	\$22,357	\$27,343	\$30,265	\$25,608	\$27,318	\$30,424
Department Libraries (books ordered through Coll. Lib.)	5,623	9,357	7,642	5,914	7,436	8,339
Total	\$27,980	\$36,700	\$37,907	\$31,522	\$34,754	\$38,763

* Includes \$620 accumulated income of the Boott Fund, not previously reported.

† Includes a special appropriation of \$1000.

SPECIAL REFERENCE LIBRARIES

The present extent of these libraries is as follows:—

SPECIAL REFERENCE LIBRARIES	Perma- nent	On Deposit	Totals
1. Chemical Lab. <i>Boylston Hall</i>	3,031	1,219	4,250
2. Physical Lab. <i>Jefferson Phys. Lab.</i>	689	19	708
3. Botanical Lab. <i>University Museum</i>	1,262	120	1,382
4. Geological Lab. <i>Do.</i>	236	. .	236
5. Mineralogical Lab. <i>Do.</i>	869	211	1,080
6. Phys. Geography Lab. <i>Do.</i>	249	177	426
7. Zoölogical Lab. <i>Do.</i>	389	. .	389
8. Plant Physiology Laboratory. <i>Botanical Garden</i>	88	. .	88
9. Astronomical Lab.	4	. .	4
10. Statistical Lab. <i>Dane Hall</i>	93	. .	93
11. Physiological Lab. <i>Lawrence Hall</i>	62	. .	62
12. Classics. <i>Harvard Hall 3</i>	4,609	148	4,757
13. History. <i>Harvard Hall R. R.</i>	4,435	22	4,457
14. United States History. <i>Harvard Hall R. R.</i> . .	974	8	982
15. Political Economy. <i>Do.</i>	1,595	34	1,629
16. Social Ethics. <i>Emerson Hall.</i>	3,100	. .	3,100
17. Child Memorial (English). <i>Warren House</i> . . .	5,011	90	5,101
18. Lowell Memorial (Romance). <i>Do.</i> . . .	1,604	6	1,610
19. German. <i>Do.</i>	1,551	. .	1,551
20. French. <i>Do.</i>	2,613	. .	2,613
21. Sanskrit. <i>Do.</i>	1,015	31	1,046
22. Semitic. <i>Semitic Museum</i>	1,809	24	1,833
23. Mathematics. <i>Sever 22</i>	940	69	1,009
24. Mining and Metallurgy. <i>Rotch Laboratory</i> . . .	381	71	452
25. Engineering. <i>Pierce Hall</i>	7,083	195	7,278
26. Music. <i>Holden Chapel</i>	949	. .	949
27. Philosophy (Robbins Library and Psychol. Lab.). <i>Emerson Hall</i>	3,692	44	3,736
28. Education. <i>Lawrence Hall</i>	6,555	. .	6,555
29. Fine Arts (incl. Gray and Randall Coll.). <i>Fogg</i> <i>Museum</i>	1,126	13	1,139
30. Architecture. <i>Robinson Hall</i>	1,805	16	1,821
31. Preachers' Library. <i>Wadsworth House</i>	186	. .	186
32. Phillips Brooks House Library	497	. .	497
Totals	58,502	2,517	61,019

SHELF DEPARTMENT

During the year the following groups were permanently classified:

Bibliography	5,533	volumes
Hawaii	164	"
Philippines	273	"
French Documents	144	"
Italian Documents	47	"
Spanish-American Documents	210	"
Rousseau	549	"
Spanish-American Literature	536	"
	<u>7,456</u>	"

II

FROM THE REPORT OF THE LIBRARIAN

A number of friends, constant benefactors of the Library for a series of years, have continued their annual gifts of money for the purchase of books on special subjects. Such gifts have been received from Mr. Lawrence S. Butler, '98, for books on Paris; from Mr. Harold J. Coolidge, '92, for books on China; from Professor J. H. Gardiner, for books on Burmah; from Professor G. L. Kittredge, for books illustrating the history of witchcraft; from Mr. John S. Lawrence, '01, for books on the biography of successful men; from Mr. James Loeb, '88, for current subscriptions to labor periodicals and the expense of binding; from Mr. Edwin S. Mullins, '93, for books on folk-lore; from Mr. Walter S. Naumburg, '89, for books on Shakespeare; from Mr. William Phillips, 1900, for books on London; from Mr. Horace B. Stanton, 1900, for additions to the Molière collection. From this list of annual donors is missing for the first time the name of W. Bayard Cutting, Jr., 1900, who died March 10, 1910, and whose repeated gifts for the purchase of books relating to Florence, to Switzerland, and to Napoleon, were supplemented by his own well-directed efforts in selecting the books to be bought and in forwarding them to us. He had planned to begin the systematic collecting for the Library of Napoleonic literature, a field in which he took especial interest, and the Library was glad to recognize the value of his service by securing his appointment as one of its Honorary Curators. The Library will still continue to enjoy the benefits of Mr. Cutting's interest and generosity, for he left to the College a bequest of twenty-five thousand dollars, one-half the income of which will be used for the purchase of books on modern European history and the history of the countries of Northern Africa, preference being given to books on the history of France, Switzerland, or Italy, and the history of Morocco, Algiers, or Egypt.

The receipt of repeated gifts for the same purpose and the possession of funds the income of which must be used in a restricted field are a welcome source of strength to a library, both because they insure the constant growth of some specialty and because in so doing they lessen the many claims upon the general funds which are the Library's main

dependence for purchases in all directions. The Library now profits by the use of a number of such funds — some covering a relatively wide range, such as the Walker fund for “works in the intellectual and moral sciences” and the Sumner fund for “books relating to politics and the fine arts”; and others restricted to a narrower field — the Constantius fund for Greek, Latin, and Arabic; the Sales fund for Spanish; the Wales fund for Sanskrit; the Taylor fund for English; the Francis Parkman fund for Canadian history; a portion of the income of the Boott fund for music; the Strobel fund for books on Siam; the Strobel fund founded by his classmates for works on the politics of the Far East and kindred topics; the Castle fund for books on Hawaii; the Norton fund, the income of which is devoted to the purchase of rare or choice books such as Professor Norton was himself most interested to add to his library. Another fund, bequeathed by John Harvey Treat, '62, will soon be available for the increase of the Library's collections in Christian archaeology and church history. All such funds, whether small or great, perform a most useful service, and their number can be increased almost indefinitely to the great advantage of the Library.

Among other gifts of money, a complete list of which will be found in the pages of the Treasurer's Report, I mention the following:

From Mr. Gordon Abbott, '84, of Boston, \$150 for French literature. A part of this gift we were fortunately able to apply to the purchase of dramatic literature selected for us by M. Allard, of the French Department, from a notable collection offered for sale in Paris last summer.

From Professor A. C. Coolidge \$3,100 for current purchases on French and German history, Morocco, and other subjects.

From Professor Coolidge and Mr. Clarence L. Hay, '08, \$1,924.65 for books on South America to supplement the Montt collection received last year.

From the editors of the *Harvard Crimson*, \$500 in memory of Fabian Fall of the Class of 1910, president of the board of editors in 1909, to be used for the purchase of additional copies of much used books to be reserved in the Reading Room for the benefit of the larger lecture courses.

From the Dante Society, \$30 in continuation of many former gifts, to be used toward the increase of the Dante collection.

From Professor R. B. Dixon, \$25 for books on Australia.

From Mr. James F. Rhodes, of Boston, \$300 for books on the history of the South.

From the Saturday Club of Boston, \$500 for the purchase of books.

From Mr. Enrique de C. Zanetti, '97, of New York, \$150 for the purchase of two important Cuban periodicals, the *Revista de Cuba*, 1877-84, 16 volumes, and the *Revista Cubana*, 1885-94, 21 volumes.

Several joint gifts and anonymous gifts for books on the South, on Algiers, on Oceanic linguistics, on English literature, and for books that were in John Harvard's library will be found mentioned in the Treasurer's Report.

Two important special collections have been received, Professor Morgan's collection of Persius, and Mr. Marshall C. Lefferts's collection of the works of Alexander Pope.

Professor Morgan's Bibliography of Persius, mentioned in my last report, was issued as number 58 of the Library's Bibliographical Contributions in March. As number 49 of the same series, an earlier edition of the Bibliography had been printed in 1893. In its revised and enlarged form, it records 1,029 titles, including 486 editions, 291 translations, revisions, and reissues, and 252 writings on Persius. Professor Morgan was an exact and painstaking bibliographer, and the greater part of the books described he had personally examined. He based his work naturally on his own admirable collection (660 of the 1,029 titles recorded) and on the editions to be found in the College Library, but he also sought his material far and wide in the libraries of Europe and America. In regard to books which he had not himself seen, he secured careful notes by correspondence with librarians and scholars, and seldom trusted to the statements of second-hand authorities. His own collection of Persius he presented to the Library, in accordance with a long-cherished design, in December, only a few days before he was attacked by the illness from which he never fully recovered. He died from heart failure on March 16, 1910. The collection and the Bibliography taken together form an appropriate memorial of one who had long been a constant friend of the Library and had served on the Library Council continuously since 1894, acting as its Secretary from 1896 to the time of his death. The Hon. Daniel B. Fearing, of Newport, an intimate friend of Professor Morgan and an ardent collector in his own line (angling), had added many items to the Persius collection while it was forming, and since Professor Morgan's death he has sent to the Library from time to time a number of rare editions to enrich still further the collection of his friend.

The Alexander Pope collection of Mr. Marshall C. Lefferts is one of extraordinary completeness, consisting of 387 volumes and 128 pamphlets, the result of many years of search and study. The collection includes the first editions of all Pope's poems, twenty-two editions of the "Essay on Man," and twenty-six of the "Dunciad," many of them items of extreme rarity. Mr. Lefferts's notes and memoranda toward a bibliography of Pope and a number of photo-relief blocks for printing facsimiles of title-pages and illustrations have been acquired with the books and will be most useful when we are able to issue a detailed catalogue of the collection.

President Eliot has sent to the Library from time to time during the year over 800 volumes and 600 pamphlets, leaving us free to make any disposition we please of those that the Library does not care to accept. Mr. Warren A. Locke, Organist and Choir Master of the College Chapel for many years, has given us 235 volumes relating to church music. From the estate of the late John Harvey Treat, '62, we have received 140 volumes and 126 pamphlets. From the American Bible Society and the Massachusetts Bible Society we have received a large number of Bibles and Testaments in foreign languages, and during the summer of 1910 these were supplemented by a gift from the British and Foreign Bible Society of over 250 volumes of the same nature, largely representing the less known languages of Africa, India, and the islands of the Pacific.

For the benefit of the Graduate School of Business Administration we have taken pains to collect sets of the reports of Chambers of Commerce and similar bodies, both in this country and abroad. Circulars were sent to these institutions in a large number of cities and reports from most of them (in some cases long sets of documents) have been received.

From the National Library of Chile we have received 70 volumes and 69 pamphlets, for the most part government documents.

Mr. Archer M. Huntington, of New York, and the Hispanic Society of America have added to their former gifts a number of valuable facsimiles of early Spanish works, making the set of facsimiles of this nature in the Library complete.

Mr. Francis McLennan, '79, has sent to the Library a number of Italian manuscripts and other early works relating to Italian history and archaeology.

From Dr. James V. Tabor, of Hodgdon, Maine, a graduate of the Medical School in 1867, the Library received by bequest 94 volumes, including a number of medical and theological works.

From the estate of the late Professor Wolcott Gibbs, the Library received 83 volumes, nearly all of which related to Germanic and Scandinavian legends and folklore and to mediaeval romance. Part of these books were retained in Gore Hall and part were placed in the library of the German Department and in the Child Memorial Library.

About 200 volumes of German literature were received from the library of the late Professor George A. Bartlett, given by his niece, Mrs. A. B. Hendricks of Pittsfield. Part of these were placed in the text-book library in Phillips Brooks House.

From the estate of Mrs. Asa Gray and from the family of Professor Francis J. Child a large number of volumes, pamphlets, and papers have been received.

In July, 1910, the Library received from the estate of Professor J. B. Greenough 1,027 volumes and 400 pamphlets, and from the estate of Professor Charles Gross 500 volumes and 522 pamphlets.

By the kindness of Mr. Grenville H. Norcross, '75, the Library was enabled to acquire at the auction sale of President Willard's manuscripts, in the spring, such of President Willard's private papers as seemed to have a distinct college interest. These included letters from Richard Price, Thomas Brand Hollis, Joseph Priestley, and Dr. John C. Lettsom, letters from President Willard to his wife, 1799-1802, describing journeys taken to Albany, Ball's-Town Springs, Pittsfield, Philadelphia, Baltimore, and Washington, four letters to Governor Hancock (1784-1791), addresses to the students, in English and Latin, and other papers. Other letters, of a more strictly official character, the Misses Willard of Cambridge generously withdrew from the sale by bidding them in, and delivered to the Library to find an appropriate place in the College archives. These included letters from John Adams, Alexander Hamilton, the Chevalier de la Luzerne, Granville Sharp, Count Rumford, Tobias Lear (on behalf of Mrs. Washington), Archbishop John Carroll of Maryland, President Ebenezer Fitch of Williams College, Rev. John

Prince of Salem, and a number of other correspondents; also an interesting and valuable collection of papers and accounts connected with the Commissioners appointed by the General Court in 1653 to investigate the affairs of the College, together with contemporary letters or subscription-lists from a number of Massachusetts towns, and a collection of the papers relating to the case of William Vassall of Cambridge vs. Daniel Rogers, one of the tutors and fellows of the College, for an alleged assault made upon him near the market-place in 1733.

From Mr. Grosvenor S. Hubbard, of New York, the Library has received a manuscript note-book of Jonathan Trumbull, of the Class of 1727, written out apparently when he was a sophomore in College, and containing a transcript of Judah Monis's Hebrew Grammar, a part of William Brattle's Logic, and some other extracts.

APPLETON CHAPEL AND PHILLIPS BROOKS HOUSE

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — In my last report I referred to the decision of the Board of Preachers, with the consent of the President and Fellows and of the Overseers, that the Sunday service in the Chapel should be held at eleven o'clock in the morning. That change was made upon the first Sunday after the Christmas recess. A new order of worship had been adopted by the Board of Preachers. The choir, which, since 1886, had been composed partly of men and partly of boys, has been, since the change, made up exclusively of students. At this service the President of the University has usually read one of the Scripture lessons. The south side of the Chapel has been reserved exclusively for students and the north side for instructors and their families, the public being admitted only to the galleries.

The expectation of the Board of Preachers in reference to this change has been more than fulfilled. The total number of those present has increased, on the average, about 25 per cent, as compared with the evening service in more recent years. But as the public has now almost ceased to attend, the increase in the number of students and of members of Faculty families would be represented by a much greater percentage. The largest attendance was on Easter Sunday, — 895, of whom 459 were students. The average attendance at the twenty-four services was 339, the average number of students being 168. Thus we have at the morning service an audience made up almost exclusively from the direct constituency of the University and, to the proportion of one-half, of students. The figures show also that the attendance is a regular one and is not exposed to great fluctuations as under the old arrangement. These results the Board of Preachers are disposed to regard as fully justifying the change. But they believe that with the coming, every year, of large numbers of new students, who have not already established church relations, the proportion of those who will regard the Chapel as the place of their stated worship will be increased. Certainly, also, the coöperation of the University instructors and of their families under the new arrangement is most encouraging. The number

of those in attendance at daily morning prayers also increased somewhat during the second half of the year as compared with the corresponding period in recent years.

The Board of Preachers at the end of the year sent out a letter to parents and guardians of students calling attention to the religious opportunities which the University offers and asking the support of the friends of the University in their endeavor. The response to that letter has been gratifying.

At the end of the year Mr. Warren A. Locke, the organist and choir-master, who has served the Chapel since 1882, resigned his post, and Archibald T. Davison, Jr., Ph.D., Austin Teaching Fellow in Music, was appointed in his place.

The Phillips Brooks House Association has chosen a Chapel committee which has coöperated efficiently with the Board of Preachers. The relations between the Chapel and the House were never closer or more harmonious than at present.

The societies constituting the Phillips Brooks House Association reported last year about 650 members. These societies, either separately or jointly, are responsible for much of the religious life and activity of the University. The Board of Preachers would express warm sympathy with their work. The visiting preacher in residence at Wadsworth House, who is conducting the Chapel services, often spends much of his time in coöperating with the work at Brooks House. The hours for consultation with the preacher have been changed this year to meet the convenience of the students. The Bible study work has been carried forward and this year, at the request of the Brooks House, Professor Platner has offered a regular course in the Division of History of Religions under the title, "The Elements of Christianity," dealing largely with the life and teachings of Jesus.

The Social Service Committee of the Brooks House Association mediated the employment of nearly 300 men last year in various forms of charitable, philanthropic, and social work in Cambridge or Boston and the neighborhood. The effective administration of this work is a great task. The enthusiasm manifested for it and the sacrifices which the men make on its behalf are gratifying.

The use of the information bureaus and of the libraries and reading rooms at the House increases from year to year. Besides this, the House is the centre of a good part of the official hospitality of the University.

THE GRAY HERBARIUM

TO THE PRESIDENT OF THE UNIVERSITY:—

SIR, — To show as clearly as possible the relation of the scientific activities at the Gray Herbarium to its income and expenses, the present report is limited to the eleven months from August 1, 1909, to June 30, 1910, this being, it is understood, the period covered by the corresponding report of the Treasurer of the University.

During the period mentioned the regularly employed staff of the establishment has consisted of the Curator (Asa Gray Professor of Systematic Botany), an Assistant Professor of Botany, a collector, a librarian, an assistant engaged partly in bibliographical work and partly in the sorting and distribution of specimens, and an assistant occupied chiefly in the mounting of specimens. As supplementary aids Mr. C. A. Weatherby was employed during August, 1909, in determinative work and in the distribution of specimens, and Miss H. E. Day has been employed during portions of the academic year 1909-10 in bibliographical indexing.

The more noteworthy collections of plants received have been as follows: 1. *By gift or in exchange*: from Mr. C. E. Faxon, 4,212 specimens of flowering plants and ferns, a gift of high scientific value, being his personal herbarium, the result of many years of careful and discriminating collecting and skilled preparation; from Mr. E. D. Merrill of the Philippine Bureau of Agriculture, 620 plants of the Philippine Islands; from the Field Museum of Natural History, 143 plants of Texas, 155 plants of the Illinois Valley, and 53 miscellaneous duplicates; and from the New York Botanical Garden, 142 plants of Cuba. II. *For identification or verification*: from the Geological Survey of Canada, 135 plants of British America; from Mr. W. S. Cooper, 248 plants of Isle Royale; from the Philadelphia Academy of Sciences, 148 plants, chiefly of the Middle Atlantic States; from Mr. E. C. Bartram, 133 plants of the Middle and Southern States; from Dr. C. W. Townsend, 74 plants from the southern part of the Labrador Peninsula; from Mr. R. A. Ware, 140 plants of the Sierra Nevada Mountains of California; and from Mr. H. E.

Sargent, 176 plants of New Hampshire. III. *Contributed toward the continuation of the Exsiccatae Grayanae* (a series of critically identified species distributed by the Gray Herbarium): from Professor J. F. Collins of Brown University, 100 specimens; from Mr. C. H. Knowlton, 200 specimens; from Mr. E. B. Chamberlain, 100 specimens; and from Professor M. L. Fernald and Mr. A. J. Eames, 200 specimens. IV. *Acquired by purchase*: from Mr. T. S. Brandegee, 521 plants of southern Mexico, collected by Mr. C. A. Purpus; from Mr. B. F. Bush, 517 plants, chiefly from Missouri, also 122 specimens of the difficult genus *Crataegus*; from Mr. F. Raine, 559 plants of France; from Professor C. F. Baker, 107 specimens to illustrate plants of economic importance; from Professor A. Nelson, 479 plants of Wyoming; from Professor C. O. Rosendahl, 242 plants of Vancouver Island; from Professor A. A. Heller, 594 plants of Wyoming, Montana, Utah, and Nevada; from Mr. W. W. Eggleston, 256 plants of the southern United States; from Mrs. A. A. Eaton, the herbarium of the late Alvah A. Eaton, including by estimate about 4,500 specimens, a collection especially rich in ferns and fern-allies; from dealers, 253 plants of Italy in continuation of the *Flora Italica Exsiccata*, and 1,730 specimens from the Baenitz *Herbarium Dendrologicum*. V. *Collected by members of the staff*: by Mr. C. G. Pringle, 462 plants of Mexico; and by Professor Fernald, 2,447 plants of Maine and New Brunswick, 340 plants of Massachusetts and Connecticut, and 155 plants of Rhode Island.

The entire number of specimens received from all sources has been 21,854. The number of sheets of mounted specimens added to the organized portion of the Gray Herbarium has been 12,616, which brings the whole number in the collection to 451,114.

In addition, 1,579 sheets of plants have been prepared and mounted to form the nucleus of a laboratory herbarium—a collection to exhibit as clearly as possible the chief components in the flora of the northeastern United States and adjacent Canada, and to serve as illustrative material in the elementary course on systematic botany.

To the library of the Gray Herbarium there have been added 818 volumes—the largest annual accession recorded—and 342 pamphlets. The library contained on June 30th, 12,129 volumes and 9,566 pamphlets. There have been three issues of the Card-index of New Genera and Species of American Plants,

together amounting to 7,114 cards. This index, edited by Miss Mary A. Day and published by the Gray Herbarium, contained on June 20th, 87,996 cards.

At the time of the last annual report, the Kidder Wing was in advanced construction. This important addition to the building of the Gray Herbarium was completed toward the end of March. It is a two-storied structure, fifty-five feet in length and twenty-four in breadth, so placed as to yield additional room both for the herbarium and for its library. This wing, the gift of Mr. Nathaniel T. Kidder of Milton, for many years a member of the Visiting Committee, not only gives great relief from the serious congestion of the older portions of the building, but far surpasses them in convenience and safety. Constructed exclusively of incombustible materials and furnished with steel cases for the specimens and steel shelving for the books, it yields a very perfect protection against fire, and the careful exclusion of wood greatly reduces the danger from insect pests, from which herbaria must be carefully guarded. The construction, though in a measure experimental, has resulted so successfully in all details, that it will be taken as a model both for further additions, and for the refitting of the older portions of the building.

The Kidder Wing will give safe accommodation for about two-fifths of the specimens in the Gray Herbarium and for about one-third of the books in the library. To render the older part of the building safe the following changes will have to be made. The wooden floors should be replaced by reinforced concrete, the present wooden gallery should be replaced by a somewhat wider structure of iron, or of iron and glass. The wooden sash and window-frames should be changed for metal, and the present wooden cases should be replaced by steel ones of the type employed so successfully in the Kidder Wing. Finally, the roof, at present a double structure inclosing an air-space with much exposed wood-work, should be replaced by a simpler construction of concrete. As difficult as these changes may appear, preliminary examination and estimates by contractors show them to be feasible at no inordinate expense. The importance of the result in prospect is obvious. Could these changes be effected the irreplaceable collections of the Gray Herbarium would be, for the first time in their history, in thoroughly safe surroundings.

Attention is called to these needs of the Herbarium at this time because if such changes are to be made, they can be accomplished

much more easily now than after a delay of some years. The normal growth of the collections and library will quickly tend to bring about again the same trying congestion which existed before the construction of the Kidder Wing, a condition of affairs which would make it almost impossible to clear the main portion of the building for the needful changes and repairs.

The removal of the now unused Gray dwelling, a large frame structure adjoining the herbarium building, has been considered imperative for the safety of the latter. The fact that the rent from the dwelling has been an important item in the income of the Botanic Garden and might have continued a resource had the house been repaired and re-let, has made it seem only just that the Gray Herbarium should reimburse the Botanic Garden at least for some portion of the loss incurred. To this end the Herbarium has agreed to pay to the Garden the sum of \$2,000 on the removal of the house, this sum being considered appropriate by a member of the Corporation who kindly consented to take the matter under careful advisement.

It is the policy of the Herbarium ultimately to extend its building over the site now occupied by the Gray dwelling-house, this space being ample for a square two- or three-storied structure to include the work-rooms, offices, sorting-rooms, store-rooms, etc., which are yearly becoming more needful as the staff and visiting specialists increase in number and as the growing collections encroach more and more upon the space available for the activities of the workers. Back of this proposed addition, there is happily ample ground for the final construction, as needed, of a large stack-wing parallel with the Kidder Wing and sufficiently distant to permit good light. This, in brief outline, gives what may from our present point of view be regarded as the most desirable as well as the most feasible development of the building as a whole. One of the great advantages of this plan of growth lies in the fact that it may be gradual, the successive parts of the building being added as needed and as funds are available. It has also the advantage that it will conserve the usefulness and historic interest of the present structure and permit the final attainment of a thoroughly safe and satisfactory housing of the Herbarium at much less cost than would be involved in the construction of an entirely new building.

The Visiting Committee again issued its annual circular in the interests of the Herbarium, and in prompt and cordial response gifts ranging from \$2 to \$100 were received from 119 subscribers,

whose names and contributions are enumerated in the report of the Treasurer.

The Gray Herbarium was represented by the Curator at the International Botanical Congress in Brussels, a notable scientific gathering convened from the 14th to the 21st of May, important for its further legislation on the difficult and long controversial subject of botanical nomenclature.

During the period covered by this report 29 scientific papers have been published by the Gray Herbarium. As their titles have been fully recorded in the *University Gazette*, they need not be repeated here.

B. L. ROBINSON, *Curator*.

THE BOTANIC GARDEN

TO THE PRESIDENT OF THE UNIVERSITY:—

SIR, — As Director of the Botanic Garden I have the honor of presenting the following report for the year 1909–10.

Only slight changes, such as were called for by unavoidable conditions, have been made in the arrangement of the plants in the Garden. The present arrangement is generally satisfactory, so that no alteration was contemplated. Several groups, however, which had outgrown the space allotted to them were transplanted, and the beds beside the path which is parallel with Linnaean Street converted into a shrubbery. In recent years these beds had become almost useless, as the trees which grow near them cast a dense shade.

Mr. Cameron, the Head Gardener, reports that the autumn season was favorable for garden work and that planting operations were followed by unusual success. The winter was not severe, but several snow storms did much damage to trees and shrubs. The losses among herbaceous plants were not serious or numerous. In the spring there was an abundance of rain which favored growth, and as a result the Garden was exceptionally attractive.

Following the custom of the former Director, our display of spring bulbs was augmented by importations from Holland. This display stimulates widespread interest, is of educational value from a horticultural point of view, and attracts numerous visitors to the Garden. Besides the purchases made abroad we were fortunate in receiving as a gift from Messrs. R. & J. Farquhar & Co. a large collection of bulbs, which made a valued addition to the Garden and furnished material for the elementary classes.

The students of Botany in Harvard and Radcliffe were supplied with plants and flowers as in the past.

The Harvard Experiment Station in Cuba, under the superintendence of Mr. R. M. Grey, is in satisfactory condition and continued its activities through the year. The results already obtained in the work done on tropical plants, chiefly in the improvement of the sugar cane, are encouraging and give promise of far-reaching benefits. With sufficient time to carry out the experiments now in progress this Station as a branch of the Botanic

Garden should have an influential future. At present the collections under cultivation include many genera and species of useful plants which are being carefully observed and from which, by means of seed, several noteworthy novelties have been derived.

The palm house and its two wings have outlived their usefulness. These are old buildings, for the most part of wooden construction, which, notwithstanding the repairs made on them from time to time, have reached a condition that makes further attempts to prolong their service inadvisable and assuredly uneconomical. A new range of green-houses to replace the old one was contemplated early in May, but it was deemed best not to begin the building of an elaborate structure at that time. It was planned only to make necessary repairs and to put the houses in condition to withstand the severity of one more winter, with the intention, if the needed funds could be raised, to rebuild them in the ensuing spring or summer. When, however, the palm house was examined with this end in view, its plight was found to be so wretched that the immediate erection of a new one was thought expedient. Plans for a new range to be erected on the foundations of the old one were then secured, and the work of reconstruction is already in progress. When this work is finished the Garden will have excellent accommodations for its collections of tender plants, and by the rearrangement of the houses will gain much needed space under glass. For the necessary funds to carry on the work of reconstruction the Director is indebted to friends of the Garden.

This year space in the green-houses and a plot of land were assigned to Dr. Bradley M. Davis for experimental work in connection with his studies of *Oenothera*. Part of this work is being done at the Bussey Institution, but those cultures which demand close personal attention and represent material on which important cytological investigations are being made Dr. Davis was anxious to retain at Cambridge near his residence. Although the limited area of the Garden is severely taxed by work of this kind, which necessitates much room if comprehensive results are to be obtained, its scientific significance is of sufficient importance to be given every encouragement possible. It is to just such work that a large part of the resources of a botanic garden ought to be devoted, and in the judgment of the Director space which is ordinarily given up to ornamentals or to plants that are of purely horticultural interest is of greater value for definite scientific research.

Heretofore the Garden green-houses have provided much room for horticultural collections which are of slight benefit to the classes in botany and are used mainly for decorations at academic functions. For a number of years it has been a serious question how far the Garden is justified in growing material which comes under the head of florists' flowers. One of our most serviceable houses has been used mainly for the cultivation of roses, and House No. 14 has become well known for its exhibitions of cyclamen and primroses. Very recently the cultivation of roses was abandoned, and what was formerly the rose house will be given up to experimental cultures in connection with the work of the physiological laboratory.

The green-house policy of the Garden in the future will be to exhibit as completely as practicable the important plant groups with numerous representative species and gradually to abandon the cultivation in quantity of florists' flowers and purely decorative plants.

During the past three years the University has undertaken experiments on the practical use of fungus diseases affecting the brown-tail and gypsy moths as a means of partially controlling these pests. This work, which was undertaken at the suggestion of Professor Thaxter and has been done under his general supervision, is being carried on in collaboration with the State Foresters Office, which has rendered every assistance possible in its prosecution. Having been begun in the year 1908 by Dr. G. P. Clinton, it has subsequently been continued by Mr. A. T. Speare, whose experiments in planting a native disease of the brown-tail have been followed, in the large area selected during the past season, by widespread epidemics which were estimated to have destroyed from 80 to 100 per cent of the larvae before or after pupation.

In order to accomplish this work it has been necessary that a considerable amount of green-house space should be available for use in propagating the disease; both for the purpose of keeping it over winter in an active condition, and of furnishing large quantities of material for infection in connection with the plantings above mentioned, which were made in May and early June. The prosecution of this work has been rendered possible by the facilities afforded at the Garden, and during a portion of the time about two thirds of the available space in House No. 14 has been employed for this purpose.

Further experiments have been carried on at the Garden in relation to a similar disease of the gypsy-moth larva, which was successfully imported in 1908 by Dr. Clinton, who was sent to Japan by a friend of the University for the express purpose of obtaining it, and of bringing it alive to this country. This disease has been successfully wintered over and propagated at the Garden during the past year; but owing to unexpected delays in obtaining it in an active condition, and to unfavorable weather after its propagation in this active state was accomplished, it has not as yet been possible to demonstrate its effectiveness. As soon as it can be established in badly infested areas, however, there seems every reason to believe that it will become a very important factor in the control of this insect which, in America, is not subject to any native disease of this nature.

The work on both these diseases will be continued at the Garden and will be in charge of Mr. Speare, who is now employed by the State Foresters Office solely for this purpose.

Our income is inadequate. It falls far short of meeting ordinary expenses of maintenance. Consequently the Director is obliged to resort to methods of economy which seriously hamper the development of the Garden and only allow makeshift repairs. It is unfortunate that this condition cannot be relieved at once. The Garden is a necessary adjunct of the Botanical Department and should be kept at a high point of efficiency. It is difficult to increase and maintain collections with our slender income, and it is not to be expected that the Garden can be creditably conducted if the gifts of friends must be utilized to meet unavoidable current expenses. By means of gifts the Garden completed the year without a deficit, and for the first time in many years is free from debt.

During 1909-10 four papers devoted to orchids, a new edition of the third volume of *Orchidaceae*, and a monograph of the North American species of *Habenaria* were published by the Director.

OAKES AMES, *Director*.

THE BOTANICAL MUSEUM

TO THE PRESIDENT OF THE UNIVERSITY:—

SIR, — I have the honor of presenting the following report on the condition of the Botanical Museum. Heretofore the annual report has been incorporated with that on the Botanic Garden because the two establishments have been under the same direction. They have now been separated.

The Botanical Museum is contained in the central section of the University Museum.

In a large room in the basement are stored the fossil plants which were obtained by Professor Louis Agassiz and which were formerly kept in the Museum of Comparative Zoölogy. At the suggestion of the late Alexander Agassiz they were transferred in 1894 to the Botanical section and were placed in charge of Professor Robert T. Jackson who arranged them in a convenient manner for study. The considerable expense attending the construction of new cases and the arrangement of the specimens was borne by Mr. Elliot C. Lee. Numerous additions have been made to this collection from time to time, mainly by purchase.

The instructive exhibit of selected Cryptogamic, or flowerless, plants, installed by Professors Farlow and Thaxter in the main entrance of the central section, is in satisfactory condition. This exhibit, which is under the supervision of the Cryptogamic Department, continues to be very attractive to visitors.

The long room on the left, on the same floor, is assigned to the main collections of the useful products of plants. For purposes of easy reference and rapid consultation these specimens are being arranged in three systems: (1) according to the natural families of plants from which the economic products are derived, (2) according to the chief uses of the products, and (3) to indicate their geographical distribution. During the past year large and costly additions have been made to these collections, and the new specimens are being incorporated with the standard sets. Although this apartment is a laboratory and storehouse rather than an exhibition-room, it has been thrown open on certain occasions to manufacturers and their employees.

The Ware Collection of Blaschka glass-models of plants in flower occupies the greater part of the third story. Important

changes have been made here and there in the systematic arrangement, but no new specimens have been added for about two years. A new invoice is expected from Germany early in the coming year. It will contain illustrations of the different devices by which plants are cross-fertilized by the agency of insects.

The collection now comprises over 3,600 numbers. There are 720 complete specimens of plants in flower, and about 2,700 magnified details of floral structure. One hundred and forty-seven natural families of flowering plants, 512 genera, and 687 species are now installed in the cases, while 20 have not yet been exhibited. They will all be put in their places when the next specimens arrive. In the long room adjoining the Ware collection there is a synoptic display of the more important useful products of plants. The work of installing these specimens has been difficult and costly, but it is proceeding without serious interruption. An anonymous friend of the University has provided means for the continuance of this installation, and he has also contributed to the purchase of new books illustrative of Economic Botany. He has provided temporarily for the general care of the small working library in the Museum.

An attractive case in the balcony on the fourth floor contains a few specimens of sugar-cane from Cuba, which possess great interest as having been produced at the Harvard Botanical Station near Cienfuegos, as the fruits of experimentation there. These specimens indicate the close relation which should exist between the Museum and other parts of the Botanical Department, especially the Botanic Garden. It is the endeavor of those in charge of these two allied branches of the establishment to coöperate in every practicable way.

GEORGE LINCOLN GOODALE,
Honorary Curator.

THE ARNOLD ARBORETUM

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — I have the honor to submit the following report on the progress and condition of the Arnold Arboretum during the year ending June 30, 1910.

The new work which has been undertaken and accomplished on the grounds during the year has been for the improvement of the old natural woods and for the extension of groups already established, and has not materially changed the appearance of the Arboretum. 1,037 species and varieties of trees and shrubs have been permanently planted during the year. Of these a large part are new to the collection.

The Chinese plants raised from the seeds collected during the Arboretum expeditions to China are the most interesting feature of the nurseries. Among them is probably the largest number of new hardy plants which has been introduced at one time into the United States. As a slight return for their interest in the work of the Arboretum some of the most interesting of these young Chinese plants have been sent to those subscribers to the fund to increase the income of the Arboretum who have cared to experiment with them. This general distribution of these plants promises to increase our knowledge of their adaptability to the climate of the eastern United States and of their value for general cultivation. Nearly 3,000 plants have been sent out under this arrangement.

Mr. Wilson returned to the Arboretum from England at the end of the last academic year and remained here, arranging his collections, until April. He then returned to western China under an arrangement with the Arboretum to collect the seeds of conifers and other plants which he was unable to secure during his previous journey. He expects to return to the Arboretum in April or May of 1911. Mr. Purdom has carried out the programme prepared for him before he left the Arboretum for Peking in February, 1908. His first season, passed in regions not particularly rich in woody plants, produced a fair return. He reached the high mountain region of southern Shensi in the early spring of 1910, but of the results of his second season's work it is still too soon to speak.

The addition to the Hunnewell Building described in my last report has been finished and is entirely satisfactory. The herbarium has been installed in its new quarters and the slow work of rearranging the library under a classified system of subjects is progressing.

To the herbarium have been added during the year 6,150 sheets of dried plants and 939 sheets have been distributed to other institutions.

The library now contains 22,525 bound volumes, 1,950 volumes and 283 pamphlets having been added during the year.

The interchange of plants and seeds with other horticultural and botanical establishments has been continued during the year. 7,292 plants, including grafts and cuttings, and 365 packets of seeds, have been distributed as follows: To the United States, 6,649 plants and 92 packets of seeds; to Great Britain, 411 plants and 211 packets of seeds; to the continent of Europe, 232 plants and 62 packets of seeds. There have been received 1,006 plants and 530 packets of seeds; of these 430 plants and 156 packets of seeds came from the United States; 210 plants and 9 packets of seeds from Great Britain; 366 plants and 142 packets of seeds from the continent of Europe; 42 packets of seeds from Japan; and 181 packets of seeds from China (Purdom, 173; Wilson, 8).

During the year instruction in dendrology has been given at the Arboretum by Assistant Professor Jack to University students in forestry and to a class of twenty-six special students, principally teachers.

Under a contract with the Riverside Press the printing of the Bradley Bibliography has been commenced and about half of the first volume is already in type. The work on the catalogue of the library and on the catalogue of the living collections has made satisfactory progress during the year.

I take this opportunity to express again my thanks to the Trustees of the Massachusetts Society for Promoting Agriculture for their annual grant to increase the knowledge of trees, and to the members of the Visiting Committee who have been active and successful in enlarging the income of the Arboretum.

C. S. SARGENT, *Director*.

THE CHEMICAL LABORATORY

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — In the absence of Professor Sanger I have the honor to submit the following report on the Chemical Laboratory for the year 1909-10.

Conditions in Boylston and Dane Halls have not altered during the past year. The number of laboratory elections in chemistry again diminished, but not markedly.

A handicap under which students in chemistry labor is the extra expense of laboratory courses in chemistry; for the fee for materials and breakage is seldom as low as \$25 for one laboratory full course above Chemistry 1 and frequently is between \$40 and \$50. Since many of the students studying chemistry elect at least two laboratory courses per year, the excess in cost of a chemical training over that in most other subjects is very considerable. In the face of recent annual deficits in the Chemical Laboratory there seems to be no way of reducing the expense to the students unless an appropriation of considerable size be made to the laboratory or an endowment secured.

During the year twenty students devoted the whole or a part of their time to original investigations in inorganic, physical, or organic chemistry, under the direction of the members of the Division of Chemistry, and eighteen papers were published, embodying as a rule the results of investigations pursued during the previous year. The titles of these papers have already been published in full in the *University Gazette*. Additional grants from the Carnegie Institution of Washington of \$2,500 to Professor Richards and of \$1,000 to Assistant Professor Baxter were of inestimable advantage for the furtherance of inorganic and physico-chemical investigations.

It is gratifying to note an increasing tendency to continue laboratory investigations throughout the period of the Summer School.

One of the most encouraging features of the year was the securing of a fund of nearly \$100,000 for a new research laboratory of physical chemistry. Of this sum Dr. Morris Loeb, '83, and his brother, Mr. James Loeb, '88, generously contributed \$50,000,

while nearly an equal amount in smaller subscriptions was secured through the kind coöperation of Dr. Alexander Forbes, Messrs. Augustus H. Fiske, James C. Howe, and other friends of the laboratory. While the gift of Dr. and Mr. Loeb is conditional upon an equal amount being subscribed, the remainder of the necessary \$50,000 has been underwritten and will doubtless soon be obtained. The new building will be named in memory of Dr. Wolcott Gibbs, and will be located on Divinity Avenue, near the Peabody Museum. Plans are rapidly maturing and it is hoped that the building may be ready for occupancy some time in the year 1911-12. While the new building will not provide relief for the main laboratories of Boylston Hall, at any rate the congested condition of the rooms used for inorganic and physico-chemical research will be avoided. The need for a complete new plant for the teaching of chemistry remains unchanged.

GREGORY P. BAXTER, *Acting Director.*

THE JEFFERSON PHYSICAL LABORATORY

TO THE PRESIDENT OF THE UNIVERSITY:—

SIR, — All the members of the Staff of the Laboratory have been actively engaged in research during the past year. The list of their investigations is as follows: Professor Trowbridge, "The Discharge of Electricity through Gases"; Professor Hall, "The Thermal and Electrical Properties of Iron"; Professor B. O. Peirce, "Researches in Magnetism"; Professor Sabine, a continuation of his researches in Acoustics, with special reference to Interference and Resonance; Professor G. W. Pierce, "Problems connected with Wireless Telegraphy"; Professor Lyman, "Spectrum Analysis in the Region of very Short Wavelengths"; Professor Morse, "The Internal Resistance of Lead Accumulators" and "The Investigation of Primary Batteries"; Professor Davis, "The Thermal Properties of Mercury"; Dr. Bridgman, "Compressibilities and Equilibrium Conditions under High Pressure"; Mr. Chaffee, "The Velocity of Cathode Rays"; Mr. Hayes, "Properties of Alloys."

The list of investigations carried on by advanced students is as follows: Mr. L. A. Babbitt, "The von Waltenhofen Effect"; Mr. P. H. Royster, "The Joule-Thomson Effect in Thermometric Gases"; Mr. W. G. Sawtelle, "The Nature of the Spark Discharge"; Mr. T. T. Smith, "The Influence of Crystalline Form upon the Magnetic Behavior of some Substances"; Mr. C. M. Swan, "The Minimum Audible Intensity of Sound"; Mr. H. M. Trueblood, "The Joule-Thomson Effect in Steam"; Mr. D. L. Webster, "The Absorption of Light."

During the summer Professor J. L. Hogg has continued his researches on the friction in gases at low pressures, and Mr. F. Palmer has continued his investigations on the volume ionisation produced by ultra-violet light. Throughout the year Professor L. L. Campbell of Simmons College has worked with Professor Hall on the Thermal and Electrical Properties of Iron.

A permanent foundation for the Fellowship for Research is now at hand. At his death W. Bayard Cutting, Jr., bequeathed \$25,000 to the University, the sum to be expended under the direction of Mr. E. H. Wells. Mr. Wells, with characteristic

unselfishness, has directed that the interest on half the sum shall go to the maintenance of the W. Bayard Cutting Fellowship for Research in Physics. "This Fellowship, to be considered as a reward for men of the very highest intellectual attainments, is to be conferred on a successful investigator in order that he may remain in the University in the pursuit of his research."

This gift is due to the effort of Professor Theodore Lyman in promoting the interests of research in the University.

JOHN TROWBRIDGE.

THE OBSERVATORY

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — As the objects of the Observatory are research and the advancement of astronomical science, the principal results of its work appear in its publications, and in the vast collection of facts contained in its astronomical photographs, which in number now exceed two hundred thousand. The growth of the Observatory is shown by the increasing number of its Annals, a series which, at the present time, contains more than sixty quarto volumes. The number of volumes issued in the twelve five-year periods, from 1851 to 1910, are 0, 2, 3, 0, 2, 5, 2, 10, 8, 9, 9, and 15, respectively. While some of these volumes are still incomplete, this fact is more than compensated for by the condensed form of publication adopted in the later volumes. The observations of each star, which were formerly published in such detail as to occupy one or two lines, are now condensed into a half or a third of a line. The average number of volumes published during the first thirty-five years was two in five years, during the last twenty-five years it has been five times as great, or ten in five years. The still larger number during the last five years is due to improved methods of reduction and preparation for publication. The amount of material still unpublished, but nearly ready for the press, is so great, and the facilities we now have for its preparation are so complete, that the present rate of publication could probably be maintained, but for the unfortunate diminution in our income, mentioned in my last report. The annual deficit has now become so great, that it cannot be met by petty economies at Cambridge. The most natural remedy seems to be the closing of the Station at Arequipa. It is hoped, however, that only a partial abandonment of work there will be necessary.

A meeting of the Astronomical and Astrophysical Society of America was held at this Observatory in August, 1910, at which forty-eight papers were presented. The number of persons attending the sessions exceeded one hundred, including about twenty European astronomers. The latter came to attend the triennial meeting of the International Solar Union, at Pasadena, the largest gathering of the leading astronomers of Europe ever

held in this country. In all, about forty foreign astronomers took part, and nearly all of them visited this Observatory, either before or after the meeting. The opportunity for discussion and interchange of views at these meetings and during the long journey across the country proved of the greatest value to those who availed themselves of it.

OBSERVATORY INSTRUMENTS

East Equatorial. — The observations with the 15-inch East Equatorial have been made by Professor O. C. Wendell and have been of the same general character as in previous years. Nearly thirteen thousand photometric comparisons have been made, mainly with the polarizing photometer with achromatic prisms. A large part of the measurements relate to stars of the Algol type, some of them serving to determine the light curves and times of minima, and others, to determine the corrections to the periods. Observations of several known variables, not of the Algol type, have been made. Several stars whose variability is doubtful, have also been observed, the accuracy of the measurements made with this instrument permitting slight changes to be detected with certainty. Over 700 measurements of 32 stars, having spectra of the fourth type, have been obtained, the variation in light previously detected in several of these stars being still further confirmed. 640 settings have also been made on the variable R Coronae. An extensive series of photometric measures of the nucleus of Halley's Comet was made, including 800 settings on 35 nights.

With a second photometer, adapted to the measurement of adjacent objects, nearly a thousand measurements of double stars have been made. Seventeen eclipses of Jupiter's satellites have been observed photometrically, making 897 in all. Several other objects of a miscellaneous character have also been observed.

Meridian Circle. — The reductions of the Zone $-9^{\circ} 50'$ to $-14^{\circ} 10'$ have been completed, and the progress in its publication is described below. It is expected that during the present year the entire work will be finished. It has occupied the time of Professor Searle and a corps of computers, for more than twenty years. The Meridian Circle is now used only for time observations. Before any large piece of work is undertaken with this instrument, it should be remounted, a transit micrometer attached to it, and other important changes made.

Meridian Photometer. — The only work done with the 12-inch Meridian Photometer this year has been to complete the measures of 177 sequences of comparison stars for variables of short period. 20,648 settings have been made by the Director, on 99 nights, making the total number of settings, during the last twelve years, 725,732. The work assigned to this instrument and to the 4-inch Meridian Photometer is now substantially completed, and further work has not been planned for them. The latter instrument has been returned from Arequipa, and mounted, as formerly, in the West Wing of the Observatory.

HENRY DRAPER MEMORIAL

The number of photographs taken with the 11-inch Draper Telescope is 353, making 18,182 in all; with the 8-inch Draper Telescope, 639, making the total number 36,852. The entire number of photographs of the stars taken at Cambridge during the year is 4,579. Five eclipses of Jupiter's satellites have been observed photographically with the 11-inch Draper Telescope. Also, the spectra of Jupiter's satellites have been successfully photographed with the same instrument, and distinct images of α Lyrae were photographed in daylight. The spectra of 642 southern stars have been classified by Miss A. J. Cannon, from the examination of 457 plates taken with the 13-inch Boyden and the 11-inch Draper Telescopes.

The Draper Memorial photographs still continue to contribute liberally to our lists of stars having peculiar spectra. Mainly from the study of these photographs, Mrs. Fleming has found 21 new variable stars, 1 star of the fourth type, 2 stars of the fifth type, 4 stars of the sixth type, 4 gaseous nebulae, and one star whose spectrum appears to be unique. Of the 21 new variables, 17 have spectra of the third type having also bright hydrogen lines, three have spectra of the fourth type, and one is probably an Algol variable. As the result of a special investigation, the hydrogen lines have been found to be bright in 65 known variable stars. Eight meteor trails were found on photographic charts. Fourteen stars, having spectra of the fourth type, have been found to be variable, by Miss Wells, three of these being already suspected by Espin but not confirmed or published as variables.

In continuation of the investigations undertaken by Mr. King, a redetermination of the photographic magnitudes of the 33 stars discussed in H. A. 59, No. 4, has been made. A supple-

mentary list of 76 stars has also been measured. This makes the total number of stars 163, whose magnitudes have been determined by this method. Experiments have been made, using objective prisms, in determining the motion of stars, by means of the absorption line of neodymium chloride. There is reason to believe that the velocities of faint stars can thus be measured with an uncertainty of less than ten kilometres.

BOYDEN DEPARTMENT

The Arequipa Station has continued in charge of Mr. Frank E. Hinkley. The weather has proved to be slightly less favorable than that of the preceding year. The 13-inch Boyden Telescope was undergoing repairs during five months, and the number of photographs taken with it was only 204, making 12,834 in all. 1,088 photographs were made with the 8-inch Bache Telescope, making 41,983 in all. The total number of stellar photographs taken at the Station during the year was 2,974.

BRUCE PHOTOGRAPHIC TELESCOPE

The number of photographs taken with the 24-inch Bruce Telescope was 475, making a total of 10,303. During the year, 67 photographic charts were made of the selected areas of Kapteyn, having exposures of two hours. 278 charts and 15 spectrum plates were taken with exposures of one hour. They formed part of the regular scheme for such plates, to cover the whole sky.

BLUE HILL METEOROLOGICAL OBSERVATORY

The observations and researches are made under the direction and at the expense of Professor A. Lawrence Rotch. The climatological observations have been conducted under identical conditions for twenty-five years. The present investigations relate chiefly to the upper air. For this purpose, kite flights were made, usually on the international days, to a mean height of 7,000 feet above sea level. The maximum height in any flight was 8,560 feet. The air currents were also observed sixteen times with pilot-balloons, which were observed visually up to an average height of 24,700 feet, the extreme height of eleven and a half miles being the greatest at which observations have been made at Blue Hill. Sounding balloons carrying instruments were sent up seven times from Pittsfield, Mass., but only four of them were recovered, the maximum height being

eight miles. One of the balloons which ascended six and a half miles on May 19, the day after the supposed passage of the earth through the tail of Halley's Comet, recorded no abnormal temperature, nor were any unusual meteorological conditions perceived at Blue Hill.

MISCELLANEOUS

Variable Stars. — The visual observations of variable stars have been continued as in recent years. The number of variable stars of long period now regularly observed is 336. Sequences have been selected for 177 variables of short period and Algol stars, and the estimates of the intervals, and measures with the photometer, have been practically completed. From 52 sequences, containing 384 stars, it appears that the mean difference between the magnitudes derived from the visual estimates and those found by the photometer is only one tenth of a magnitude.

Mr. Campbell has made 2,631 observations of variables, mainly with the 24-inch Reflector, and Mr. L. S. Flint has made 421 with the 6-inch West Equatorial. 2,526 observations have been received here, of which 704 were made at the Harvard Station in South Africa, by Professor Bailey and Mr. Schultz; 409, by Mr. Sidney Manning, of South Australia; 363, by Miss A. S. Young, of Mt. Holyoke College; 277, by Mr. W. T. Olcott, of Norwich, Conn.; 244, by observers at Vassar College Observatory; 232, by observers at Amherst College Observatory; 189, by Mr. J. H. Eadie, of Bayonne N. J.; 63, by Miss Helen Swartz, of South Norwalk, Conn.; 49, by Mr. M. W. Jacobs, of Harrisburg, Pa. A careful series of visual estimates of the light of Halley's Comet was made by Mr. Campbell, extending from October, 1909, to June, 1910, inclusive.

Observatory of the Rev. J. H. Metcalf. — The 16-inch Metcalf Telescope has now been completed and is mounted on the grounds of the Observatory. The instrument is a very remarkable one, in many respects. The corrections are so perfect that, by the use of curved plates, the images of stars near the corners of an 8×10 plate are as good as those near its centre. The necessary curvature is given by exhausting the air, back of the plate. The mounting is a duplicate of that constructed for the 24-inch Reflector. Motion is given to the telescope by an electrically controlled motor. A 9-inch finder is attached for following, but is not needed for stars near the meridian, as circular images can be obtained with exposures as long as an hour, without following.

This instrument will complete, for the northern stars, the work of the 24-inch Bruce Telescope, on the southern stars, at Arequipa.

Mr. Metcalf and his assistant have taken 257 photographs in Taunton with his 12-inch doublet, and an equal number with his 6-inch doublet, which is carried by the same mounting. He has also discovered a variable star and Comet 1910b, and has followed six asteroids for periods of about six months each. These asteroids are now having their orbits computed by volunteers, in this country. A large number of known asteroids have also been observed, and photographs have been obtained showing Phoebe, and the sixth satellite of Jupiter.

South African Expedition. — The study of climatic conditions in South Africa was concluded during the year. Professor Bailey returned to Cambridge early in January, but the work of the Hanover Station was continued several months longer by Mr. L. G. Schultz, who, in connection with meteorological observations, carried on observations of variable stars, as well as photographic work with the Cooke Anastigmat lens. Meteorological observations were also contributed by the courtesy of Mr. James Lyle, of Bloemfontein, and Mr. Izak Meiring, of Worcester. Observations were thus obtained at these three widely separated localities. The Hanover Station has now been closed, and the instruments packed for shipment to Cambridge. The expedition has yielded astronomical results of much value. A careful discussion of the climatic observations will be made later. It appears, however, that localities exist in South Africa, where the cloudiness is much less than at Arequipa, or Cambridge, but the conditions, in other respects, are less favorable than was expected. On the whole, it is doubtful whether a better location than Arequipa can be found in South Africa.

Additional Investigations. — Among other investigations in progress here, the following may be mentioned: — An elaborate study of the photographic magnitudes of a sequence of stars near the North Pole, by Miss H. S. Leavitt. Measures of the photographic magnitudes of thirty-six sequences of stars distributed throughout the sky, by Miss E. F. Leland. Reduction of the precise positions of sixteen thousand faint stars published in H. A. 1, 2, and 6, by Miss M. Harwood. A systematic search for variables in all parts of the sky, according to a uniform system.

Library. — The Library of the Observatory has been increased by 369 volumes, and, by binding, the number of pamphlets has been diminished by 555. The present extent of the collection

is 13,242 volumes, and 29,597 pamphlets. It is scattered through the various rooms of the Observatory and continues in constant danger of destruction by fire.

Telegraphic Announcements. — Thirty telegraphic announcements have been made, of which ten were received from Kiel, ten from the Lick Observatory, and the others from various sources. They are sent to whoever wishes for them, free of expense beyond that charged in each case by the telegraph company. The syllabic code continues to be used.

Cablegrams intended for this Observatory should be addressed "Observatory, Boston," and all telegrams, "Harvard College Observatory, Cambridge, Mass." All correspondence should be addressed to the Director.

Sixty neostyle bulletins have been issued, making the total number 425. They form a very quick and convenient method of keeping astronomers informed of current work.

Publications. — Excellent progress has been made in the publication of the Annals. 52, Part 2; 55, Part 2; 56, No. 5; 59, No. 5; 64, Nos. 4, 5, and 6; 69, Part 1; 70, have been distributed. 71, No. 1, is ready for distribution. 65 is in type, and the first 130 pages have been printed. It contains the first portion of the Journal of the Observations with the Meridian Circle of the Zone $-9^{\circ} 50'$ to $-14^{\circ} 10'$. 66, containing the remainder of the Journal, is all in the hands of the printer. About 80 pages of it are in type. 67, containing the Catalogue of the Zone, is completed, and has been sent to Germany for publication. It will appear also in the publications of the *Astronomische Gesellschaft*. 56, No. 5, Classification of 1,669 Southern Stars by means of their Spectra, and 59, No. 6, Photographic Magnitudes of 153 Stars, are in the hands of the printer. 25 pages of 56, No. 6, and 52 pages of 68, Part 2, are in type. The set of Annals is therefore complete and distributed from 1 to 60, with the exception of 47, Part 2; 56, Nos. 5 to end, and 59, Nos. 6 to end. 61, Parts 1 and 2; 62, Part 1; 64, Nos. 1 to 6; 68, Part 1; 69, Part 1; 70; 71, No. 1, are also completed. The reason for the large number of incomplete volumes is due partly to the number of independent researches in progress here, and partly to the attempt to assign numbers having the same unit to volumes relating to the same subject. Thus Volumes 14, 24, 34, 44, 54, and 64 all contain observations made with the Meridian Photometer. This plan was abandoned, owing to the scattering of the numbers. Numbers are now assigned in the order in which it is expected that the volumes will be completed.

Eleven circulars have been issued, whose numbers, titles, and dates are as follows: —

152. 20 New Variable Stars in Harvard Map, Nos. 2, 5, 32, 44, and 53. January 14, 1910.
153. Opposition of Eros (433) in 1910. Ephemerides of Bright Asteroids. February 16, 1910.
154. Determination of Absolute Wave-lengths with Objective Prisms. March 12, 1910.
155. Accurate Measurement of Photographs. March 21, 1910.
156. Comparison Stars for Halley's Comet. March 30, 1910.
157. Brightness of Halley's Comet. March 30, 1910.
158. Stars having Peculiar Spectra. 38 New Variable Stars. March 31, 1910.
159. 15 New Variable Stars in Harvard Map, Nos. 7, 10, 16, and 19. The Variable Star, 124045, $+46^{\circ}$ 1817. March 31, 1910.
160. Photographic Magnitudes. Progress to July, 1910. August 1, 1910.
161. Curved Photographic Plates. August 1, 1910.
162. 22 New Variable Stars in Harvard Map, No. 52. September 21, 1910.

Various other publications by officers of the Observatory are described in the *Harvard University Gazette*, each month.

EDWARD C. PICKERING, *Director*.

MUSEUM OF COMPARATIVE ZOÖLOGY

TO THE PRESIDENT AND FELLOWS OF HARVARD COLLEGE: —

During the academic year 1909-10 seventeen courses were given by Professors Mark, Parker, Wheeler, Castle, Rand, East, and Mr. Brues to two hundred and ninety-seven students in Harvard University.

The Assistants in these courses were Messrs. E. A. Boyden, J. W. Chapman, E. C. Day, John Detlefsen, A. O. Gross, Henry Laurens, E. C. MacDowell, J. W. Mavor, Sergius Morgulis, and W. R. B. Robertson.

The Virginia Barret Gibbs Scholarship was held by Mr. R. A. Spaeth. The income of the Humboldt Fund aided four students, three at the Bermuda Station for Research, and one at Bermuda and at the Museum in Cambridge.

The instruction in Radcliffe College was given by Professors Mark and Rand, assisted by Mr. Sergius Morgulis, and by Mr. D. W. Davis. Four courses were given to twenty-four students.

The number of courses and of students in 1908-09 was: — *Harvard*, seventeen courses, two hundred and thirty-seven students; *Radcliffe*, five courses, eighteen students.

The instruction in the Department of Geology and Geography was given by Professors Davis, Wolff, Ward, Palache, Johnson, and Mr. Lahee, assisted by Messrs. J. W. Eggleston, W. P. Haynes, W. G. Reed, Jr., Sedgwick Smith, and B. M. Varney.

Eighteen courses were taken by two hundred and fifty-five students in Harvard University and four courses were taken by twenty-one students of Radcliffe College.

In 1908-09 the number of courses and of students was: — *Harvard*, nineteen courses, three hundred and nine students; *Radcliffe*, two courses, twelve students.

The income of the Josiah Dwight Whitney Scholarship Fund was used to aid students in the Rocky Mountain summer course.

A bronze tablet with the following inscription: —

Museum
and
Laboratories
of
Geology and Geography
erected
By the Children of Louis Agassiz
1901

has been set in the wall of the entrance hall of the southwestern corner of the University Museum.

The life size portrait of Louis Agassiz painted in 1842 by Fritz Zuberbühler (1822-1896) has been hung on the east wall of the northwestern section of the Museum where it is visible alike to students and to visitors. It comes to the Museum as a gift of the children of Alexander Agassiz.

Mrs. Henry L. Higginson has given a flag inscribed on one side

Hotel des Neuchâtelois

and on the other

Kein Felsen Widersteht
So fest der Macht der Zeit
Als festen Willens
Bestaendigkeit

words well known to all familiar with the work of Louis Agassiz among the glaciers of the Alps. The flag has been placed in the Geological Museum.

For additions to its year's income the thanks of the Museum are due Messrs. Gorham Brooks, Louis Cabot, Theodore Lyman, and John C. Phillips.

In May, 1907, the Museum installed as a gift of Mr. Agassiz a model of the coral island Bora Bora, and shortly afterwards Mr. Agassiz arranged with Mr. George C. Curtis, whose Bora Bora was so satisfactory a piece of workmanship, for a model of the classic atoll, Funafuti.

One of the Ellice Islands, situated in the Middle Pacific, Funafuti was selected as an atoll showing an extremely narrow land rim with a large lagoon. It had, moreover, the advantage of having been personally examined by Mr. Agassiz, whose notes, together with the Report of the Coral Reef Committee of the Royal Society, furnished Mr. Curtis with the data for his work.

Though Funafuti lacks the scenic beauty of Bora Bora, Mr. Curtis, by his skilful use of color, shows most effectively the depth of the ocean and the shallowness of the lagoon. The former is represented by dark blue and the lagoon in varying tints of blue and green. The atoll rises gently from a depth of 2,000 fathoms, while the lagoon ranges from four feet to twenty fathoms in depth.

For the case in which Funafuti is shown the Museum is indebted to Miss E. H. Clark.

From Mr. John E. Thayer's wise generosity the whole Museum benefits. Owing to his chief personal interest the greater number of the additions received from him are birds, but Mr. Thayer's liberality and broad-mindedness are such that the expeditions he fosters in unexplored regions yield material for the research collections in all departments.

For the exhibition collections Mr. Thayer has given a magnificent specimen of the California Vulture, mounted with the wings showing a spread of nearly nine feet. Two other notable additions to the exhibition collections received from Mr. Thayer are: a superb male Reeve's Pheasant, *Syrnaticus reevesii*, measuring six feet, nine and three-fourths inches in length, with the tail more than five feet six inches long; and a fine Tibetan Takin, *Budorcas tibetanus*, a mammal rare in collections and obtained by Mr. W. R. Zappey in the mountains at Liang How Kow, western Szechnan. The Pheasant and Takin were mounted by the Museum Preparator, Mr. George Nelson.

Drs. William Lord Smith, Glover M. Allen, and Mr. Gorham Brooks spent about three months, July-September, 1909, in British East Africa collecting in the interests of the Museum. As the result of their energetic industry and skill the Museum collections have been enriched with series of small mammals, bird skins, reptiles, amphibians, fishes, and of insects and other invertebrates, together with about fifty specimens, skins with complete skeletons, of large game mammals. The generous assistance of Messrs. Shepherd Brooks and John E. Thayer made possible this African expedition.

Additional specimens from British East Africa have been received from Mr. Childs Frick. Mr. Frick, accompanied by Mr. W. R. Zappey as his Assistant, hunted in British East Africa from December, 1909, until March, 1910, and has been so good as to give the Museum some acceptable invertebrates as well as the collections of birds and small mammals that he secured. Mr. Frick's series is a most useful supplement to the Smith-Allen-Brooks collection, as it was obtained at a different time of the year.

To Dr. John C. Phillips the Museum owes thanks for an important collection of skins of Mexican birds. The Museum's series of birds from Middle America is an especially large and valuable one and Dr. Phillips's gift of over 2,000 skins obtained principally in Tamaulipas, Mexico, by Mr. George B. Armstrong, fills one of the gaps from which, geographically, material was most needed.

The Museum is indebted to Miss Elizabeth B. Bryant for many additions to its series of New England spiders; she has also worked over portions of the collection of spiders and has given considerable time to the study and preservation of the same.

Mr. Thomas Barbour has, as in previous years, enhanced the value of the research collections of reptiles and amphibians by his gifts of very many rare and valuable species and also by his voluntary work of identification, together with much of the attendant museum drudgery. A noteworthy addition received from him is an excellent specimen of the rare Chinese Alligator, *Alligator sinensis*. Mr. Barbour's gifts are not confined, however, to the groups in which he is especially interested; among much desirable material he has given a Japanese Serow, *Nemorhaedus crispus*, and a living example of the Bahama Parrot, *Amazona bahamensis*, a species whose extinction is probably a matter of a few years only; important additions to the collections of mammals and birds, of insects, shells, and other invertebrates, are included in Mr. Barbour's various donations.

For a specimen of the rare West African Forest Pig, *Hylochoerus rimator*, the Museum has to thank Mr. William Barbour, and for a number of small Irish mammals mounted for the exhibition collection similar thanks are due Mr. J. R. T. Mulholland.

The Museum of Zoölogy of the University of Cambridge (England), through Dr. Hans Gadow, has been kind enough to send in exchange an important series of Hawaiian Honey Creepers, a series which contains several species hitherto unrepresented in the collection of the Museum, and also an especially valuable lot of bones of the extinct Solitaire, *Pezophaps solitarius*, collected in Rodriguez by Jenner in 1871.

For a mounted specimen of the Almique, *Solenodon cubanus*, the Museum is indebted to the Havana Institute of Secondary Education. Especial interest is attached to this specimen as the label is in the hand of the distinguished Cuban zoölogist, Dr. Juan Gundlach.

The Carnegie Museum, Pittsburg, through its Director, Dr. W. J. Holland, has presented a plaster restoration of *Dinohyus hollandi*, a remarkable giant pig from the Miocene of western Nebraska. This model is shown in full relief and is the work of Mr. Theodore A. Mills. Dr. Holland has also kindly sent in exchange a fine series of fishes, one of the results of explorations in British Guiana carried on by the Carnegie Museum under the direction of Professor C. H. Eigenmann.

The Museum has received another valuable collection of fishes from the U. S. Bureau of Fisheries. These specimens are in an excellent state of preservation and were captured in the Pacific when Mr. Agassiz was in charge of the U. S. Fish Commission Steamer "Albatross" during the cruise in the Tropical Pacific in 1899-1900, and again in 1904-1905, Expedition to the Eastern Tropical Pacific.

The New York Zoölogical Society has continued its policy of sending to the Museum specimens of reptiles, many of which, after Mr. Nelson's skilful taxidermy, supply for exhibition purposes most desirable dry mounts. Its donations this year, for which the thanks of the Museum are tendered, include among several others a striking example of the Green Boa, *Corallus caninus*, from Surinam, and one of the Bushmaster, *Lachesis mutus*, a most venomous snake from Trinidad. The skeleton of the Bushmaster, prepared by Mr. Nelson, is shown with the mounted skin.

While engaged in anthropological work for the Peabody Museum in South and Central America, Dr. W. C. Farabee and Dr. A. M. Tozzer kindly procured for this Museum some zoölogical specimens of value. Dr. Tozzer's collection included both vertebrates and invertebrates, while the specimens received from Dr. Farabee were mostly insects.

Interesting specimens have also been received from Mrs. Henry Bryant, from Drs. H. B. Bigelow, C. B. Davenport, Walter Faxon, E. W. Gudger, R. T. Jackson, Theodore Lyman, A. G. Mayer, H. K. Oliver, and H. W. Smith, and from Messrs. William Brewster, Edwin Farrar, E. N. Fischer, C. A. Frost, R. H. Howe, Jr., R. O. Morris, A. P. Morse, and R. A. Spaeth.

The W. G. Dietz collection of Coleoptera, a valuable accession, was acquired by purchase. This collection is especially rich in Rhynchophora, Snout-beetles, from all parts of the world, and contains more than one hundred specimens which are the types of species described by Dr. Dietz and others.

It should be mentioned that the Dietz series of Rhynchophora makes a notable supplement to the Deyrolle collection which was given to the Museum in 1870 by Mrs. Augustus Hemenway.

Some Green River fossils collected by the late Professor Leslie A. Lee of Bowdoin College were bought of Mrs. Lee; among this collection there are the types of a number of fossil insects described by S. H. Scudder and two important specimens of fossil fishes described by E. D. Cope.

Twelve mounted specimens of several forms of the Land Tortoises of the Galapagos have been purchased of Miss E. E. Hull and the F. B. Webster Company.

During his studies of fossil Echini, Dr. R. T. Jackson got together a number of valuable specimens. As the Museum has an important series in this group, it was glad of the opportunity of purchasing the Jackson set which contains a number of figured specimens, casts of types, and types.

Considerable series of bird skins from India, Australia, New Guinea, New Zealand and from other parts of the world have been purchased of Messrs. Angell and Cash, W. F. H. Rosenberg, and S. F. Denton. From Mr. Denton the Museum has also acquired mounted fishes for its Systematic, European, and North American collections. Specially prepared specimens of Medusae have been bought of the Naples and Woods Hole Laboratories and of Professor A. E. Verrill, and additional instalments of slides of Rotatoria have been received from Mr. C. F. Rousselet.

In 1906 the Museum was enabled through the generosity of Mr. Agassiz to undertake the renovation of all its entrance and exhibition halls. Since that date a number of the work rooms in the Museum have, from the Museum's own resources, undergone a similar renovation, and during these changes additional safeguards against fire, such as resistant doors and windows, have been introduced. Danger from fire is lessened also by the withdrawal of alcoholic specimens on exhibition and by the substitution of carbon tetrachloride for carbon bisulphide as a preventive against insect pests. The number of mounted reptiles and fishes introduced in place of alcoholic specimens of the same has been very great during recent years. Carbon tetrachloride is less volatile and less disagreeable to work with than carbon bisulphide; to be equally effective, however, it must be used in larger quantities than is necessary with carbon bisulphide, but it is not inflammable and notwithstanding its greater cost has proved a most desirable substitute for carbon bisulphide.

New cases have been built in the exhibition rooms devoted to the Systematic collections of mammals and of coelenterates, and in the North American room the three floor cases have been replaced by one large case, which encloses also the central space of the gallery of the fourth floor. Additional space for the display of mammals and birds is afforded by this change. A new wall case in the North American gallery has also been built.

Mr. Bangs is making good progress in overhauling the study collection of bird skins, merging the E. A. and O. Bangs series and the very many skins received in recent years from Mr. John E. Thayer with the Museum collection, and arranging the entire series according to the British Museum Hand List. With additional equipment in the way of cases, this important department will be in the course of a few years in most satisfactory condition.

In addition to his collecting in British East Africa, Dr. G. M. Allen has been employed for three days in each week throughout the year. The condition of the study series of mammals shows constant improvement as the result of his work, which includes the identification or reidentification and rearrangement of the entire series of skins and skulls, together with the labelling and cataloguing where such work is necessary. Following Trouessart's Catalogue the collection is in order as far as the Muridae. A part of Dr. Allen's time is devoted to research, one of the results of which has been published as *Memoirs M. C. Z.*, vol. 40, no. 1, *Solenodon paradoxus*, 54 pages, 9 plates.

To the preparation of specimens for exhibition Mr. Nelson gives a large part of his time. In addition to those already mentioned he has prepared a number of North American snakes and turtles, among the latter a giant Snapping Turtle, *Chelydra serpentina*, a specimen remarkable not only for its weight, fifty-four pounds, but for the absolute perfection of its exoskeletal parts; also a series of West Indian Crows and Troupials. The collection of North American mammals, the systematic collection of birds, and the special collections of domesticated animals, of nests and eggs of birds, and of heads and horns of mammals all show additions, the result of Mr. Nelson's work.

Mr. Nathan Banks was employed for two weeks, during which time he identified and labelled a large part of the collection of scorpions, and Mr. E. C. Day was engaged for several weeks in labelling some of the Bryant birds and the Selah Merrill birds and mammals.

To Messrs. Faxon, Brewster, Woodworth, Bangs, Bigelow, and Sayles the Museum is indebted for the interest they have taken in the collections under their charge.

The Library contains 46,924 volumes, and 43,367 pamphlets; 1,269 volumes, and 1,559 pamphlets have been added during the year. For many of the accessions this year the Museum is indebted to Mr. Outram Bangs, Mr. Henry L. Higginson, Pro-

fessors W. M. Davis and G. L. Goodale, and to Dr. W. McM. Woodworth.

The publications for the year include eight numbers of the Bulletin, three numbers of the Memoirs, and the Annual Report, a total of 609 (222 quarto and 387 octavo) pages, with 77 (48 quarto and 29 octavo) plates. Two numbers of the Bulletin and two of the Memoirs contain reports on the scientific results of expeditions maintained by Mr. Agassiz. Two numbers of the Bulletin contain Contributions from the Zoölogical Laboratory and the other publications, four numbers of the Bulletin and one number of the Memoirs, are based upon Museum collections and explorations.

The grant of \$350, made by the Corporation to aid in the publication of Contributions from the Zoölogical and Geological Laboratories, has been used for numbers of the Bulletin which have appeared in volume 53 and for plates to illustrate Professor Woodworth's report on his expedition to South America.

After the death in 1896 of Professor J. D. Whitney, Sturgis Hooper Professor of Geology from 1865-1896, his sister, Miss Maria Whitney, took a keen and generous interest in the Museum and its work. Her death on the 19th of January, 1910, is recorded with regret.

The death of Mr. Agassiz on the 27th of March, 1910, takes from the Museum one whose devoted service of more than fifty years will never be equalled.

In the first Report of the Director of the Museum for the year 1859, acknowledgment is made of the receipt of a great number of specimens from the Pacific Coast of Mexico, the gift of Mr. Agassiz, at that time an Aid of the U. S. Coast Survey. For the five years following, Mr. Agassiz's activities included the care of the collections of several departments of the Museum, and in those early days care comprised not only labelling and cataloguing, but the assortment, distribution and arrangement of large masses of material; during one or more of these years Mr. Agassiz also attended to the general superintendence of the Museum's business and gave courses of instruction which were open both to college students and to others. For the years 1865-66 (7th and 8th Reports), Mr. Agassiz was Assistant in charge, reporting as such and also on the work done in special departments. From the date of his return from the Thayer-Brazilian Expedition in 1866 until his death in December, 1873, Professor Agassiz in all Museum affairs relied upon the scientific judgment and business

capacity of his son. As the executive head of the Museum Committee, Mr. Agassiz made the Reports for the years 1873 and 1874. He was appointed Curator in 1875 and Director in 1892 and held these offices until his resignation in September, 1898. Since that date until his death, he gave ready and hearty support to his successors.

Such in brief are Mr. Agassiz's official connections with the Museum of Comparative Zoölogy, a Museum built, in every sense of the word, by him; for although the general plan was in the mind of its founder and in part worked out by him, the initial difficulties, due to the lack of rooms and of means, together with the accumulation of the immense collections which in 1873 overflowed the building from roof to basement, prevented Professor Agassiz from a full realization of his plans.

How well these plans have been carried out by Mr. Agassiz and with what tenacity of purpose he adhered to them, often at a sacrifice of personal interest, the Museum is the best witness.

The full extent of Mr. Agassiz's work for the Museum and of his great gifts to its collections will be clearly shown in a historical sketch of the Museum now in course of preparation.

Mr. Agassiz advocated at an early date a distinct field for the work of a University Museum; he claimed that its province should in no way compete with that of national, state, or municipal establishments, but that the maintenance of large collections by such a Museum, supplemented first by a Zoölogical Station controlled by the Museum, and secondly by explorations conducted under the direction of the Museum, was vital for the scientific progress and usefulness of the Museum.

Throughout his life Mr. Agassiz promoted these aims. In some of its departments the Museum of Comparative Zoölogy offers unsurpassed facilities for research; the resources of his Newport laboratory, together with opportunities for work at other laboratories, he rendered available for many years, while his furtherance of exploration and the publication of the scientific results have brought to the Museum and to the University their greatest distinction.

Equally pronounced was the policy adopted by Mr. Agassiz in regard to the display of specimens exhibited to the public. By the practice in vogue in most museums in 1875, large numbers of specimens, many of them merely duplicates, were arranged in single crowded series. Mr. Agassiz limited his general collection to selected typical forms and followed his father's plan of showing fossils, recent forms, and skeletons together.

In his Report for 1875 Mr. Agassiz wrote: — “ The great defect of museums in general is the immense number of articles exhibited, compared with the small space taken to explain what is shown. . . . The need of general labels, and a small number of specimens properly selected to illustrate the labels, would go far towards making a museum intelligible,” and he thus maintained an important principle in museum organization which has been supported by Goode and Flower and is to-day quite generally adopted.

In 1883, or ten years after Mr. Agassiz assumed the care of the Museum, he was able to report that the building had been doubled in size and that the invested funds for the maintenance of the Museum had been increased over three-fold. Both results were largely due to him. The uses of the several rooms noted by Mr. Agassiz at that time were not essentially different from those that prevail to-day.

Along with the systematic exhibit, Mr. Agassiz built up the geographic one, and increased the facilities for research by the acquisition of extensive collections, which were conveniently stored and made accessible to all able to make proper use of them.

The difficulties of a geographic exhibit are well recognized; none of the great museums of the world, those of London, Paris, or Berlin, have attempted such an exhibit, and there are but two in Europe that have done so, both of which, one in Dublin and the other in Dresden, are on a comparatively small scale. And yet so successfully and with so true a sense of proportion did Mr. Agassiz develop the whole Museum that the distinguished English naturalist, Wallace, stated in 1887 that as an educational institution for the public, for students, and for the special investigator the Museum of Comparative Zoölogy was superior to the British Museum and “ probably equally in advance of every European Museum.”

Mr. Agassiz's eminence as a Museum Director is secure and his standards of work will always be an incentive to those who follow him.

SAMUEL HENSHAW.

MINERALOGICAL MUSEUM AND LABORATORIES OF MINERALOGY AND PETROGRAPHY

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — The Mineralogical Collections have received the usual number of accessions by gift or purchase. Among noteworthy examples may be mentioned a superb group of English calcite presented by Mr. J. C. Rand, and large specimens of gem chrysocolla from Arizona for the collection of gem minerals from Mr. S. S. Campbell; to this collection was added a tourmaline group from California by another donor. A set of the new phenacite crystals from Brazil and other specimens were added to the systematic collection.

The Curator spent part of the summer in a geological trip to Central and Northern Sweden, and gathered a large collection of rocks and ores especially from the great iron mines of Lapland. He obtained in Stockholm four large polished slabs of the orbicular granite of Finland which will make an attractive exhibit. A large set of rocks and thin sections from the Sierra de Monchique in Portugal has been added to the rock collections. A quantity of material for exhibition and research has been obtained by Professor Palache from the pegmatite masses of Quincy and Rockport.

Several small slabs of new meteorites have been obtained for that collection, and the whole of a new and undescribed iron meteorite from Arizona. This was found by Mr. Anwell Lefave in November, 1909, on Gum Creek in the Cerros de la Ancha Mountains about seventy miles north of Globe, Arizona, was packed by him ten miles on his back and thirty miles horseback, and was given by him to the Museum for some money compensation. It weighs about fifty pounds.

Mr. J. W. Eggleston continued the preparation of his doctor's thesis on the Cuttingsville, Vt., syenite. Professor Palache continued his work on the minerals of Franklin Furnace, Quincy, etc., and published several papers.

JOHN E. WOLFF, *Curator.*

THE PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY AND ETHNOLOGY

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — It is with sad realization of our loss that I begin the records of the past year with an allusion to the death of Dr. Alexander Agassiz, our honored Director of the University Museum. Dr. Agassiz was constantly aiding the objects of this department of the Museum. He was interested in its various activities, and always expressed his gratification when its friends gave their aid toward its advancement. During his extended travels to distant countries, he secured and gave to this Museum many large and important ethnological and archaeological collections. Especially is this the case with those which he obtained in South America, Africa, and the Pacific Islands. To our library he gave many volumes and a number of albums of photographs of anthropological importance.

Dr. Agassiz was in full sympathy with those who consider the museums for research and instruction important parts of the University. He hoped to see the completion of the great natural history museum as planned by his father, thus uniting all the sections of the University Museum under one roof, and furnishing the necessary room for the development of the section of anthropology. His death will be especially felt by all connected with the natural history departments of the University.

Regarding the activities of the Museum for the past year it is with pleasure that I record the important aid which has been received from the Trustees under the will of Mary Hemenway of a fund of \$45,000, to be known as "The Mary Hemenway Fund for Archaeology." At the recent meeting of the Faculty of the Museum the following votes were passed: —

Voted, That the Faculty place on its records its thanks to Mr. Augustus Hemenway for his interest in securing the Mary Hemenway Fund for Archaeology for the Museum from the estate of his honored mother. This fund, together with the large collection illustrating the archaeology of the Southwest, which has for several years formed an important part of the Museum, will forever associate the name of Mary Hemenway with archaeological research in America.

Voted, That the Faculty place on its records the statement that the hall containing the collections from the Pueblo region of the Southwest shall always be designated as the Mary Hemenway Hall.

The first use made of a portion of the income of this fund has been the employment of a long needed assistant in the Museum to aid in the care, cataloguing, and arrangement of the archaeological collections.

The Museum Expedition to Central America for 1909-10 returned in May last. Much important information was secured at the ruined city of Tikal and at three other cities in the Department of Peten, Guatemala, two of which have not before been recorded. Dr. Alfred M. Tozzer, Instructor in Central American Archaeology, was in charge of the expedition as Field Director, and Mr. Raymond E. Merwin of the Graduate School, in the Division of Anthropology, was chief assistant. Plans of the ancient cities and of the principal ruins were made, and many photographs were taken. Dr. Tozzer's report will be published in the *Memoirs of the Museum*.

Another expedition for the season of 1910-11 has taken the field under the direction of Mr. Merwin, Fellow in Central American Archaeology, to continue the researches at one of these prehistoric cities.

Since the last report the Museum has issued one *Memoir* and two papers relating to Central American ruins and hieroglyphs, as follows: By Teobert Maler, *Explorations in the Department of Peten, Guatemala, and adjacent regions*; *Memoirs*, Vol. IV, No. 3, 50 pages, 2 plates, 1910. By Alfred M. Tozzer and Glover M. Allen, *Animal Figures in the Maya Codices*; *Papers*, Vol. IV, No. 3, 100 pages, 24 text illustrations, 39 plates, 1910. By William G. Gates, *Commentary upon the Maya-Tzental Perez Codex*, with a concluding discussion upon the linguistic problem of Maya glyphs; *Papers*, Vol. VI, No. 1, 64 pages, two plates, 1910.

Professor Gates, of Point Loma, Cal., has been engaged in the study of the Maya Hieroglyphs for many years. He has had a font of type made by which these glyphs can be used in printing. This is done for the first time in his reproduction of the Perez Codex, and in his commentary on that important Maya manuscript, the original of which is in the National Library of Paris. The Museum is fortunate in having the coöperation of this enthusiastic scholar in Central American research.

Another publication, indispensable to all students of the Maya Hieroglyphs, is the volume recently issued by Mr. Charles P. Bowditch on "The Numeration, Calendar Systems, and Astronomical Knowledge of the Mayas," 340 pages, 64 text illustrations, 19 plates. Privately printed for the use of the Peabody

Museum of Harvard University, 1910. Mr. Bowditch has cleared many a path for the student of Maya Hieroglyphs, and he has added greatly to our knowledge of the highly developed calendar and astronomical systems recorded by the ancient Mayas.

From friends the Museum has received, as heretofore, contributions in aid of the various objects. These have been recorded in the report of the Treasurer of the University and include gifts for explorations, for the salary of an assistant, for temporary assistants, for painting and repairs of the halls, and for books and binding. Among the gifts to the library mention must be made of an additional gift of \$500, by Mr. J. B. Stetson, for the purchase of books on native languages. The expenditure of this money is under the direction of Dr. Dixon. The books are to be kept in Gore Hall but are to have the Peabody Museum label and be a part of its special library.

The income of the Huntington Frothingham Wolcott Fund was partly applied to completing an arrangement by which the ethnological and archaeological collections in the American Antiquarian Society in Worcester were transferred to the Museum on the Society's removal to its new building. The Museum thus obtained many specimens of historical interest as well as a large number of special archaeological importance, particularly many stone implements found in Massachusetts in the early part of the last century, and the whole collection from Yucatan formerly belonging to Mr. Stephen Salisbury, including the collection of pottery vessels and stone implements obtained by Dr. Le Plongeon from the excavation of the "Tomb of Chac-Mool." Of interest, historically, are those referred to by Caleb Atwater in his "Description of the Antiquities of Ohio," published in the first volume of the Transactions of the American Antiquarian Society in 1820. We had previously received from the Society the collection made by Dr. Samuel Hildreth from the Marietta mounds which are described in the same volume. There are also specimens collected by Dr. I. A. Lapham during his explorations of the mounds of Wisconsin, and numerous other specimens from collectors in the early part of the last century.

With the remainder of the income of the Wolcott Fund for the year, several small lots of ethnological and archaeological objects of special importance were added to the Museum.

The income of the Henry C. Warren Fund was in part used in aiding an exploration in Newfoundland by Mr. A. V. Kidder, and in part — in connection with Mr. C. B. Moore's gift — in

the continuation of the explorations in the Delaware Valley by Mr. Ernest Volk.

The income of the Susan C. Warren Fund was used in building new exhibition cases as in former years.

During the year important gifts have been received. The largest is from our constant friend, Mr. Lewis H. Farlow, who has for several years made every effort to furnish the Museum with specimens to fill gaps in the illustration of the life and customs of the Indian tribes, particularly those of the Pacific slope. His latest contribution consists of extensive collections from the Diegueño, Pomo, Yurok, Karok, Wintun, Redwood, Yana, Mono, Maidu, Shasta, Wigot, Chukchansi and Shoshonean tribes of California; of the Klamath Lake Indians of Oregon; the Tlingit of Alaska; the Kickitat of Washington, and the Navajo of New Mexico. Mr. Thomas Barbour has given an important collection of stone implements and potsherds from the Island of Grenada, one of the southernmost of the West Indies. Since there are no other specimens in the Museum from this island, this collection is an important addition for comparative study. Mr. Barbour has also given three fine pieces of cloth from prehistoric graves in Peru. We have also received from him several specimens collected many years ago from the Chiricahua Apache; a pipe and tobacco bag from the Sioux, and two Navajo blankets; shell ear-ornaments from Dutch New Guinea, and a number of photographs, taken by himself, of ruins and Indians in Peru and Bolivia, and of ruins at Mitla, Mexico. From Mrs. Thomas Barbour we have received two beautiful pieces of cloth with elaborated woven designs from the prehistoric graves at Ancon, Peru. Mr. William Barbour has given a finely painted buffalo robe obtained several years ago from the Indians of the Great Lakes region. Mr. A. V. Kidder has presented the collection of stone implements made by him during the explorations on the west coast of Newfoundland, which was aided by the H. C. Warren Fund; also an old Tlingit basket; specimens of corn and beans from a kiva in a ruin in New Mexico, and an ancient vase from the Island of Cyprus. Dr. Clarence J. Blake has given a number of specimens collected in Peru in 1836 by his father, the late John H. Blake. In 1877 the collection made by Mr. Blake, which for several years had been in the Warren Museum in Boston, was given by Mr. Blake to the Peabody Museum. It is described in the Eleventh Report of the Museum. The specimens now given by Dr. Blake are a large stone vessel, an effigy in stone,

and a beautiful pottery vessel in the form of a fish, from the Cusco valley; a llama, pin and pendants of silver, and a cloth fringe, from a grave in Atacama, Chile; two cuttlefish eyes from the orbital cavities of a mummy from Arica, Chile. From Dr. G. M. Allen, three pairs of snowshoes of different types used by the natives of Labrador. Dr. A. B. Emerson, 2d, terra-cotta heads, spindles, whorls and cups from Teotihuacan, Mexico. Dr. William McM. Woodworth, a pair of child's moccasins from the Plains Indians. Dr. George P. Howe, Eskimo summer boots and strips of sinew from Labrador; Eskimo woman's football from Bering Strait. Miss Emma L. Coleman, a Navajo loom; a model of a cart, two models of cloth capotes and a palm-leaf basket from the Azores. Mrs. J. C. Woodman, by Dr. L. C. Jones, a Micmac box of bark ornamented with quill work; an Eskimo bag made of seal intestines, from Alaska. Miss Mary Bradley, a bone scoop from Vancouver Island; model of a cradle from the Mercalero Apache; an Apache club; model of an Indian canoe; pottery from New Mexico. Miss Anna Bradley, bow and arrow of the Plains Indians. Estate of Alexander Agassiz, tapa cloth from Fiji and Samoa. Professor J. B. Woodworth, potsherds and stone implements from Laguna, Brazil. Dr. John C. Phillips, two women's skirts from the Sudan; chipped implements and flakes from Newfoundland. The Estate of Francis A. Pierce, by Mrs. Pierce, a collection of weapons and shields from Europe, Japan, and Africa. Miss Emma Beck, terra-cotta and stone figures from Vera Cruz, Mexico. Professor A. C. Coolidge, a pottery vase from Tiahuanaco, Bolivia. Mr. George L. Osgood, Jr., six Marquesas ear-ornaments. Mr. I. F. Wheeler, a black jar from the Pueblo of Santa Clara, N. M., and an Oneida sash. Dr. H. K. Oliver, fifteen stone knives and arrow-points from near Richmond, Va. Mrs. W. D. Boardman, a basket from Abyssinia. Mr. C. D. Drew, textile fabrics from graves at Chimbote, Peru. Miss Louisa F. Orne, a pair of Chinese shoes. Mr. E. H. Thompson, a set of prehistoric pigments used in the wall paintings in the ruins of Chichen-Itza, Yucatan. Mr. James B. Shea, a harpoon-point, an axe, and large fish-hook, all of iron, copper beads and band, glass beads, bone and antler perforators, a sea shell and fragments of a human skeleton, from an Indian grave at Savin Hill Park, Dorchester. Dr. R. H. Fitz, a missile club from Fiji. Dr. J. D. Sornborger, ivory carvings of Kayak and Eskimo, from Hebron, Labrador. Miss Betsey B. Davis, casts of pottery vessels from Peru and of a large series of pipes and

other objects from mounds in Ohio, made from the originals in the Squier and Davis collection now in the Blackmore Museum, Salisbury, England. Dr. J. C. Tello, a Quechua Indian sash and a series of photographs of a large collection of Peruvian antiquities. Dr. W. C. Farabee, photographs of several ancient gold vases from Pisco, Peru. Mrs. William James, colored photographs, made by herself, of the painted sculptures on the wall of a prehistoric building, at Acanceh, Yucatan. Mr. Alanson Skinner, thirty photographs of the Seminole Indians and their habitations, taken by him in August last. Miss Grace Nicholson, a collection of photographs of Indians of several California tribes, and materials from which baskets are made by the Diegueño and Pit River Indians.

Mr. Willoughby, Assistant Curator, has done all possible, with the little aid he has had, toward caring for and cataloguing the accessions. He has placed many lots of specimens on exhibition by rearranging the cases. He has completely rearranged the African and South American galleries, and the South American and lower North American hall and gallery.

The labelling of the specimens has constantly progressed, but it is a slow and laborious proceeding and can only be accomplished by experts who have the requisite knowledge to make the labels properly explanatory. Dr. Tozzer has given aid in this work in the Central American Section and Dr. Peabody in the European Section. Many printed labels have thus been added during the year. The general labels of the rooms and of the collections in the cases have been put in place by Mr. Willoughby, as well as the location maps showing where the specimens in the case came from.

Dr. Charles Peabody during the month of May personally explored two groups of small mounds in Cumberland County, North Carolina. One of these mounds contained the remains of over fifty skeletons with which were found a number of interesting objects. He also found a cache of a few finely chipped stone points.

Miss Alice C. Fletcher, holder of the Thaw Fellowship, attended the Meeting of the British Association for the Advancement of Science, held in Sheffield in August. At this meeting she presented a paper on "The Archaeological Activities in the United States," in which she referred to the work of the Peabody Museum and its explorations. Miss Fletcher was honored by the Association for her own work in American ethnology by being made a Vice-President of the Section of Anthropology.

At the Congress of Americanists, held in the City of Mexico, Assistant Professor Dixon and Dr. Tozzer represented the University and the Museum. At the foundation of the National University of Mexico they were official delegates from the U. S. Government.

Assistant Professor Dixon, representing the University, took part while in Mexico in the organization of the International School of Archaeology, which is to be established in Mexico. The universities of Berlin and Paris were represented, and also Columbia and Pennsylvania. The plan of the School was adopted, and Dr. E. Seler of the University of Berlin was appointed the Director of the School for the first year. The plans for this International School have been under consideration for some time and from its inception the Museum has taken an active part. The cordial and liberal support given by the Mexican Government promises well for its maintenance.

Assistant Professor Dixon, as Librarian of the Museum, reports that the library has been increased by the addition of 194 volumes and 850 pamphlets during the year. Twenty-seven volumes and 16 pamphlets have been transferred to other departments. Exchanges from five Anthropological Societies have been added and four additional subscriptions to journals.

The Hemenway Fellowship for 1909-10 was held by George P. Howe, A.B., M.D. The Winthrop Scholarship was held by Robert G. Fuller for the first half-year, when he resigned as Winthrop Scholar and as Assistant to the Museum to enter a business career.

Instruction has been given in the courses of the Division by Assistant Professor Dixon and Doctors Farabee and Tozzer, who are also officers in the Museum. These instructors and the students in the Division make constant use of the Museum and its library. The class-room and upper laboratory accommodate all the classes except Course 1, which, owing to the number of students, is given in the lecture-room of the Semitic Museum.

A meeting of the Visiting Committee was held at the Museum in January, 1910. An inspection was made of the Museum and a discussion took place in regard to its needs and how best to aid in its work. In this discussion the officers of the Museum and of the Division of Anthropology took part.

F. W. PUTNAM,
Honorary Curator of the Museum.

THE SEMITIC MUSEUM

TO THE PRESIDENT OF THE UNIVERSITY:—

SIR,— In the report for 1908-09 mention was made of a collection of objects from Babylonia, consisting of seals and inscribed tablets. By a generous gift of Mr. Jacob H. Schiff it has been possible to purchase this collection for the Museum. There are 681 of the clay tablets, and they are said to have come from Tello, Abu Habba, and Nippur. They are of the class commonly known as business documents, being mainly records of commercial transactions. Among them are seventy-six of the so-called "case" tablets, *i.e.*, such as are encased in a thin envelope of clay, the envelope containing a duplicate record and seal impressions. Of the seals in the collection only the best were bought, ten in number. There are likewise two Assyrian slabs of alabaster, inscribed with the "standard inscription" of Assurnazirpal. The variants in these inscriptions are instructive for the light which they shed on the methods of Assyrian scribes.

Four new cabinets have provided space for putting on exhibition part of a Palestinian collection acquired a few years ago. This collection is believed to be of Canaanite origin, thus antedating the conquest of the land by the Hebrews. It consists mainly of pottery, which is unusually well preserved. There are dishes, vases, pitchers, jars and jugs in great variety of form, size, and degree of excellence. Among the more interesting are those covered with a black, brown, or white slip, and those which are ornamented by incisions or by painting characteristic of early Palestinian pottery. The collection contains also many objects in bronze, such as pins and bracelets, arrow tips, spear points, daggers and swords. This collection is of great value as illustrating the state of culture in Palestine before the Hebrew occupation of the land.

The great interest of the year has been the continuation of the excavations at Samaria. These have been conducted by Professor George A. Reisner, with the assistance of Messrs. Clarence S. Fisher and Oric Bates. As in 1909, the work has been carried on chiefly at the summit, the basilica, and the city gate-

way, and as in 1908 and 1909 the summit has taken most of the time and attention. The excavation of the building at the summit, identified in 1909 as the palace of Ahab, has been continued. The portion unearthed covers about one and a half acres, and there seem to be four periods of construction, which are tentatively held to be the original building by Omri and additions made by Ahab and two later kings, perhaps Jehu and Jeroboam. This large Israelite building rests on the rock and underlies the Greek and Roman buildings. In one of the rooms was found an alabaster vase with an inscription of Osorkon II. This Pharaoh being a contemporary of Ahab, the discovery of the vase tends to confirm the date to which the building had on other grounds been assigned.

Of very special importance has been the discovery of a large number of pottery fragments with writing in Hebrew characters similar in form to those of the Siloam Tunnel inscription and the Mesha inscription, which date from the eighth and the ninth century B.C. respectively. The records on these potsherds are written in ink and are memoranda relating to wine and oil. The ostraca were probably attached as labels to jars or groups of jars in a store-house adjoining the palace, and they usually state the nature of the contents, the owner and the origin of the jars. The dates name the year only, the month and day not being necessary in giving the age of wine and oil. The time is in all probability that of Ahab, though no king's name is given.

Of the many proper names mentioned on these fragments some are already familiar from the Old Testament, as Abiezer, Ahimelek, Ahinoam, Elisha, Nimshi, and Joiada. Elisha was the name of one of the leading prophets of the Omri dynasty; Nimshi, the father of Jehu, founder of the next dynasty; and Joiada or Jehoiada, the priest in Jerusalem who led a revolution against Ahab's daughter, Athaliah. While there is no suggestion that the persons mentioned in these fragments are the same as those mentioned in the Bible, it is interesting to meet the same names in the two sources.

More interesting and important is the new fact brought out by the discovery that as early as the time of Ahab it was customary to make memoranda on potsherds. That other matters more important than these labels of wine and oil were also recorded, we cannot doubt, even if we did not have Biblical warrant for such a belief. That such other records have not rewarded the labors of the excavator at Samaria or elsewhere in Palestine

seems surprising. But this discovery in the palace of Ahab gives us new hope that the court records of the kings of Samaria, or at least fragments of those records, may still be awaiting the explorer. But even if this hope be never realized, the inscribed fragments already found are a priceless treasure, in quantity and in importance far exceeding all early Hebrew inscriptions hitherto known.

Whether the Semitic Museum shall be allowed to own any of these ostraca or of the numerous coins and other small objects unearthed at Samaria, we cannot be sure. By the law all antiques found in Turkey are the property of the Imperial Ottoman Museum at Constantinople. But we hope for a division, because many of the objects are duplicates, and because our expedition has scrupulously observed the spirit as well as the letter of the law relating to excavations.

The cost of this great undertaking, which has occupied the years 1908-10, has been borne by Mr. Jacob H. Schiff, who during the current year has most generously added \$10,000 to his previous gifts of \$55,000. The points excavated have been those which seemed to be the most promising, but so extensive is the site that much less than five per cent of it has been explored. The results of the three campaigns amply justify the wisdom of Mr. Schiff in making the expedition possible. The present expedition closes with the work of this season, and it is hoped that a full account may be published during the year 1911. The new information regarding Hebrew architecture and writing is a most welcome addition to our knowledge. So important indeed does the work seem that all scholars who know of the results are unanimous in expressing the hope that there may be a resumption of the excavations in the near future.

DAVID G. LYON, *Curator*.

THE FOGG ART MUSEUM

TO THE PRESIDENT OF THE UNIVERSITY:—

SIR, — I have the honor to present the following report on the Fogg Art Museum for the year 1909–10.

The Museum has been fortunate this year in adding to its already valuable collection of original works of art a number of objects of especial interest, by purchase, gift, and as indefinite loans, while many more were placed in the Museum temporarily.

Of the permanent acquisitions, the most important are three paintings: a Madonna and Child with Angels by an early Italian master, purchased from the income of the Prichard fund; a Holy Family by Pinturicchio, and St. Luke painting the portrait of the Madonna and Child, by a painter of the school of Quintin Matsys, purchased together from the income of the Randall fund with the help of Mrs. Edward M. Cary of Milton. Another important acquisition is a drawing by Rembrandt, representing Joseph in the carpenter's shop, purchased from the income of the Randall fund. This drawing has been made the centre of interest in the Rembrandt exhibition which replaced the exhibition of primitive engravings in the print room. The prints shown illustrate Rembrandt's etched work in all its phases, and the large numbers of very fine impressions show Rembrandt at his best. The widespread interest in the art of Rembrandt and this opportunity to study his works have brought many visitors to the print room.

The collection of classical art has been enriched by two gifts from Mr. James Loeb, Class of 1888: a collection of galvanoplastic reproductions of Mycenaean objects, which supplement very fully the small number already in the Museum, and 9 galvanoplastic reproductions from Arretine moulds in the Loeb collection (6 from moulds now in the Fogg Museum, 3 from moulds in Munich). The Museum has received as a gift from Mr. Richard Norton, Class of 1892, 7 pieces of ancient pottery; from Miss Catherine I. Ireland, a wood-block engraved by Gustav Kruell; and from the Massachusetts Historical Society, a collection of plaster casts from engraved gems.

To the Gray collection, 39 prints have been added, bought at the Boston Museum sale of duplicates; 24 prints have been purchased for the Randall collection; and by gifts from Miss Catherine I. Ireland, Mr. Francis Bullard, Class of 1886, Mr. Walter Willson Metcalf, Class of 1906, and the estate of Mrs. Asa Gray, 16 prints have been added to the small but growing Museum collection.

The number of photographs added was 859, making the total number 42,777. Notable among the accessions are the Danforth bequest of about 250 photographs (many of large size) from the wife of the late Allen Danforth, and the gift from the sons of the late Alexander Agassiz, of his collection of photographs of Greek architecture and sculpture. By purchase have been added 420 photographs of English parish churches, and photographs of a representative selection of the Italian paintings in the Louvre, the Jarves collection, the Metropolitan Museum, and Fenway Court.

New slides to the number of 472 have increased the slide collection to 4,276, and have furnished additions to all of the subjects formerly represented.

The Museum library has received 30 volumes by gift, and 10 by purchase. Of the whole number, 23 are catalogues of galleries or exhibitions.

Three special loan exhibitions have been held in the gallery during the year. The first of these, an exhibition of Japanese prints, lent by Dr. Denman W. Ross, Class of 1875, offered to lovers of Japanese art an unusual opportunity to see many very rare prints, arranged in a chronological series, illustrating the history of the art from its beginning to the present day.

In the late autumn and early winter an exhibition of Ruskin drawings was held in memory of Professor Charles Eliot Norton. Drawings by Ruskin and Turner, etchings by Ruskin, and photographs of Turner drawings were lent for this purpose by Professor Norton's sons and daughters, by Miss Theodora Sedgwick, Mr. Francis Bullard, Mr. Harold B. Warren, the Boston Museum of Fine Arts, and the Fine Arts Department. A catalogue of the exhibition, with an introduction by Professor Arthur Pope, was prepared for free distribution. This exhibition attracted much attention, showing that there is a considerable interest in the works of Ruskin.

The Ruskin exhibition was followed by an exhibition of Early Italian paintings. Pictures were borrowed from the Misses

Norton, Mr. and Mrs. C. B. Perkins, Mr. W. E. C. Eustis, Mr. Louis Cabot, Mr. Augustus Hemenway, Mr. Edwin S. Webster, Professor Thomas Whittmore, Radcliffe College, and the Museum of Fine Arts. The pictures lent for this purpose, together with those already in the Museum, illustrated certain important phases of the development of Italian painting from the time of Giotto to the time of Michelangelo, and showed examples of the work of painters of the Florentine, Sienese, Umbrian, Bolognese, Paduan, and Venetian schools.

At the close of these several exhibitions, part of the pictures were returned to their owners, but a large number still remain in the Museum as temporary loans.

In addition to those already mentioned, loans have been received from several persons: Dr. Denman W. Ross has lent some textiles, a lead-pencil drawing of Strassburg by Prout, and a Ward copy of Turner's drawing of Heysham; the Misses Norton, a Greek amphora; Dr. Rupert Norton, a Burne-Jones cartoon; Mr. Richard Norton, 18 Burne-Jones drawings; Mr. John Hays Gardiner, a small head of Buddha, Gândhâra sculpture; and Mr. Francis Bullard has added a number of prints to his already large indefinite loan. Mr. Edward W. Forbes has lent several works of art, among which mention may be made of a Mystic Marriage of St. Catherine by Bernardino di Mariotto; Christ appearing to a nobleman by Leandro Bassano; the Annunciation to the Virgin of her approaching death, the work of a primitive painter of the French school; 8 Thibetan paintings; and a Chinese painting of a falcon.

Portraits of Sir Matthew Holworthy and Lady Holworthy, painted by the English portrait painter, Sir Peter Lely, the gift to the University of J. Pierpont Morgan, Jr., Class of 1889, and Edward F. Whitney, Class of 1871, have been hung for exhibition in the gallery of the Fogg Museum. A Sunset, painted by C. P. Cranch, and given to the University by Miss Caroline A. Cranch, and a Landscape by John Crome, which formerly hung in the Faculty Room, are at present in the Museum.

During the year, every uncatalogued work of art in the Museum (with the exception of the Fogg Collection, which is awaiting the convenience of an expert in Japanese and Chinese art, and certain prints and photographs which have their own special catalogues) was registered and numbered, as a possession of the Museum or as a loan to the Museum, and receipts for all loans were sent to the lenders. 981 prints, 2,525 photographs, and

472 slides were catalogued, 1,696 photographs remain yet uncatalogued, but in large part accessible for use. Seven hundred photographs were mounted for the Fogg Museum.

Photographs were lent 192 times, and slides 157 times, in general to members or departments of the University, but occasionally to outsiders.

The receipts during the year from sales of photographs and catalogues have amounted to \$43.40.

The number of registered visits to the photograph collection for the purposes of study was 844; of these 753 were by members of the University and 91 by outsiders. Of the 129 visits to the print collection, 94 were by students of Harvard University and Radcliffe College.

EDWARD W. FORBES, *Director*.

THE GERMANIC MUSEUM

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — The principal event of the academic year 1909-10 for the Germanic Museum consisted in two munificent gifts, received in November, 1909, and December, 1910, respectively, from Mr. Adolphus Busch of St. Louis toward the proposed new Museum building. These gifts, aggregating \$250,000, added to the \$37,000 endowment fund previously collected, make at last possible the erection of a building sufficiently large to display in historical sequence our present collection of German sculpture and to supplement it by the addition of other representative works of German art. The new building, then, will be practically the gift of one man. It is a pleasure to note that this man is a German-American, and that the motive of his generous action has been the wish to establish at the oldest American university an institution which shall bring to view the best that German artistic genius has given to the world. The building bearing Mr. Busch's name will be by far the largest gift made as yet to Harvard University by an American citizen of German parentage, and, besides being a monument to the donor, cannot fail to become a powerful stimulus for the advancement of the study of German culture in this country.

Meanwhile, our collection keeps on growing, thanks to the undiminished interest taken in it both here and abroad.

From His Royal Highness, the Prince Regent of Bavaria, we have received a cast of the so-called Emperor Konrad III (13th century), the oldest equestrian statue of German sculpture. It stands on a pillar in the transept of Bamberg Cathedral; and since Konrad III is buried in this cathedral, it is indeed possible, or even likely, that this equestrian statue was erected in his memory. The statue itself shows unmistakable affinity with some princely figures of Rheims Cathedral. It is, therefore, probably safest to consider it as an ideal impersonation of a ruler. While the attempt made by some critics to identify this statue with the youthful Parzival is fanciful, it cannot be denied that there is something suggestive of the Grail-seeker in the dreamy but spirited attitude of this knight.

From the Federal Council of the Swiss Republic there has come the welcome gift of a reproduction in cement of a characteristic sepulchral monument of the fourteenth century. The crowded condition of our present quarters has unfortunately prevented the mounting of this interesting monument thus far.

From Mr. Henry W. Putnam of Boston we have received twenty facsimile reproductions of Flemish and Dutch paintings, from the van Eycks to the elder Breughel. These reproductions are in the size of the originals and are strikingly like them in color. They were published under the guidance of Professor Pol de Mont, Director of the Museum at Antwerp.

From the Fairmount Park Art Association of Philadelphia has been received a cast of the monumental "Amazon" by August Kiss († 1865), from the façade of the Royal Museum at Berlin, a monument combining the classic tradition of Rauch with a certain afflatus of romantic daring.

Professor Hugo Lederer of Berlin, the sculptor of the colossal Bismarck monument at Hamburg, has given a cast of his "Fencer," one of the finest creations of contemporary sculpture, virile, intense, yet restrained.

Finally, ex-President Roosevelt, in memory of his recent visit to Berlin, has given as a loan a large, richly ornamented porcelain vase from the Königlich Preussische Porzellan-Manufaktur.

The task now before us is to secure a building plan which, while moderate in its dimensions, will be distinguished by beauty of proportion and excellence of design.

KUNO FRANCKE, *Curator*.

UNIVERSITY EXTENSION

TO THE PRESIDENT OF THE UNIVERSITY:—

SIR, — I have the honor of presenting a report on the work of University Extension for the academic year 1909–10, including the Summer School of Arts and Sciences for 1910.

In December, 1909, the Committee on the Summer School was reorganized, and the care of supplementary instruction to unmatriculated students added to its field. In February, 1910, by vote of the Corporation and Board of Overseers, the committee became an Administrative Board of the Faculty of Arts and Sciences, and the Chairman was appointed Dean in charge of University Extension.

I. THE SUMMER SCHOOL OF ARTS AND SCIENCES

In the general courses the instruction was given by thirty-five officers of the Faculty of Arts and Sciences (including seven professors and twelve assistant professors), together with eleven professors and one instructor from other institutions. Fifteen assistants were employed in these courses. The scope and character of the courses was substantially the same as in recent years, the chief changes being the omission of certain courses taken by a very few students, and in several departments an enlarged provision for research work by advanced students. The Engineering courses, mainly given at the Engineering Camp, were conducted, as usual; and the Physical Education courses were given by the Director of the Hemenway Gymnasium, with a large staff of lecturers, instructors, and assistants.

Notwithstanding the meeting of the National Education Association, which brought many thousand teachers to Boston in the first week of July, the attendance of students at the Summer School was smaller than in 1909 or 1908.

	1909	1910
Total number of students	933	873
“ “ “ men	438	476
“ “ “ women	495	397
Percentage of men	47%	54.5%

The body of students was made up as follows: —

	1909	1910
Students at Engineering Camp ¹	12	31
Harvard students of preceding academic year: ²		
Members of graduate and professional schools	17	19
Undergraduates in good standing	46	61
“ with deficient record	42	57
Radcliffe students of preceding academic year	7	11
Students in Physical Education	160	170
Students from outside in General Courses	653	528
	<u>937</u>	<u>877</u>
Names counted twice	4	4
Total	<u>933</u>	<u>873</u>

With regard to the condition and prospects of the Summer School special interest attaches to the composition of the last group, “Students from outside in General Courses,” in which the Engineering Camp, the body of Harvard and Radcliffe students, and the students in the Physical Education courses are omitted from the count. This group was made up as follows: —

Teachers and school officers :	1909	1910
Professors and college instructors	52	40
Normal school teachers	16	14
High school teachers	121	98
Grade school teachers	63	100
Endowed and private school teachers	64	54
Other teachers	86	34
Superintendents and supervisors	6	13
Principals	53	42
Total teachers and school officers	<u>461</u>	<u>395</u>
Men	163	162
Women	298	233
Percentage of men	35 %	40 %
Students from other colleges	48	39
Students from preparatory schools	2	7
Other students	47	21
Other occupations than teaching	33	34
Occupation not given	62	32
Total students from outside taking		
General Courses	<u>653</u>	<u>528</u>
Men	261	243
Women	392	285
Percentage of men	41 %	46 %

¹ Not including Engineering Camp students who were at the time members of Harvard University.

² Not including Harvard students in Shopwork courses.

In this body of students from outside there were: —

	1909	1910
Holders of A.B. or S.B. degree	173	148
Holders of a higher degree	71	57
Members of the Summer School in some previous year	146	99

The geographical distribution of this same group was as follows: —

	1909	1910
New England States	327	257
Middle States	157	124
South Atlantic States	57	26
South Central States	19	26
North Central States	66	72
Western States	6	5
Foreign Countries	21	18
	653	528

The causes of our slower growth, as compared with the summer schools of some other universities, probably lie partly in the geographical position of Harvard; partly in the circumstance that it has not proved practicable to provide a larger amount of instruction from pedagogical experts adapted to the needs of grade teachers; but also in the reputation of the Harvard Summer School for severity of requirement in the courses, together with the well-known fact that six weeks' work here brings less "credit" toward a degree than can be had with the same effort elsewhere. As to this last point it may be said that while there is every evidence that the Harvard summer courses are fully equivalent to half-courses in Harvard College, we believe that they would be over-rated if they were made to count more, or if they were made easier so that a student could ordinarily take and count two of them.

In the long run the result of our policy ought to be seen in the presence at the Harvard Summer School of a selected body of students, and in a stimulating life of study and social enjoyment worthy of the academic surroundings and traditions of the place. Among the other summer schools of the United States Harvard ought to make its distinctive contribution. Merely to duplicate what can be done as well or better elsewhere would be but a feeble aim. The present method of giving only courses each of which shall, so far as possible, occupy a student's whole time, and so of aiming to prevent dissipation of effort over too many subjects, is different from that customary in most places, and gives entire satisfaction under our conditions, although it probably does not

draw as many students as would a system which encouraged a student to hear more lectures a day, and consequently required fewer hours of study for each lecture heard.

The service of the Summer School to the community outside the University walls, for which the School mainly exists, is to be rendered by maintaining this policy of severe work and a high standard, by carefully watching the changing needs of teachers, so far as University instruction can meet them, and by providing advanced courses in important subjects to as great an extent as the means at hand permit. Eastern Massachusetts has unique and permanent interest of peculiar value to school-teachers from every part of this country who wish to vitalize their teaching of American history and American literature; and Cambridge has the attractiveness to inland dwellers of its nearness to the striking phenomena of the tides and the sea-shore. Not a great number of distant school-teachers can travel so far or undertake such exacting tasks, but to the more ambitious and able men and women we can offer much.

One gratifying fact about the Summer School this year was the large proportion of men, as shown by the above statistics. It is doubtful if any other American summer school would show as large a percentage. Among the teachers and others who come from outside there has been for the past six years a steady increase in the proportion of men, and (except for a small falling-off in 1910) an equally steady increase in their absolute number. In the same period the absolute number, as well as the proportion, of women has tended to diminish.

The falling off of numbers in 1910 was unexpected, and may indicate that the competition of the more than one hundred summer schools in various parts of the country has begun to tell more sharply than heretofore. In any case, the financial problem of the Summer School is a difficult one. The financial responsibility for the Summer School was first assumed by the University with the fiscal year 1888-89. Since that time the School appears in most years to have had a deficit, paid from the College account. In a smaller number of years there was a profit, sometimes fairly large, and, if the losses (aggregating about \$14,000) due to the unsuccessful opening of the University dining-hall for seven successive years are disregarded, the profits for twenty-two years, down to and including the School of 1910, exceed the losses by about \$2,200. In 1909 there was a deficit of about \$4,000; in 1910 of about \$5,000.

The income in 1910 and the expenses (not including the Physical Education courses) referable to the School of 1910 were as follows:—

<i>Income</i>	
Registration fees	\$1,614.00
Tuition fees (exclusive of Physical Education) . . .	15,196.67
Auditors' fees	850.00
Stated contribution from Physical Education courses .	250.00
	<u>\$17,910.67</u>
Surplus in Physical Education courses . . .	445.35
	<u>\$18,356.02</u>

<i>Expenses</i>	
Salaries and grants for instruction	\$16,584.00
Public exercises and hospitality	1,016.21
General expenses	520.55
Administration and office expenses	2,197.02
Advertising and circulars	1,989.93
Postage	289.19
Tuition fees remitted	100.00
University Charge :	
Bursar's Office	\$180.57
Publication Office	285.93
University Catalogue	214.47
	<u>680.97</u>
	<u>\$23,377.87</u>

These repeated deficits will make necessary in 1911 the strictest economy and a small reduction in the rate of salaries.

II. UNIVERSITY EXTENSION IN TERM-TIME

The opportunity and need of providing instruction for the community outside the walls of the University, and especially for the body of school-teachers in and near Boston, has occupied the Faculty of Arts and Sciences for several years, partly in consequence of the earnest efforts of a committee of Boston public-school teachers. In 1906 plans were made for Afternoon and Saturday Courses for Teachers, and in the succeeding years such courses were given as follows, for a fee of \$15 per course:—

	Courses offered	Courses taken	Registration
1906-07	18	11	156
1907-08	16	12	110
1908-09	3	1	14
1909-10	1	0	0

The courses of the last two years were from the regular list and were offered in Boston. The courses of the years 1906-07 and

1907-08 were not intended to correspond closely to college courses, and were given in Cambridge.

At the same time with these efforts the Lowell Institute established free evening collegiate courses, given by Harvard instructors, as follows: —

	Courses	Half-courses	Registration	Certificates given
1907-08	2	0	587	132
1908-09	1	3	1,614	322
1909-10	1	2	886	255

These were all (with one exception, in which there was some modification of method but not of standard) courses from the regular Harvard list, given in exactly the same manner as the corresponding undergraduate courses. They were consequently accepted for the degree of A.B. and S.B. by Harvard and Radcliffe.

In addition to these courses, one of the courses of the Teachers' School of Science and one public collegiate course at the Boston Museum of Fine Arts have been recently given by members of the Harvard Faculty.

In the years beginning with 1906-07 an important series of Courses for Teachers has been offered in Boston by the professors of Boston University, and has had a steadily increasing attendance.

The existence of these various enterprises brought out the need of coöperation, and in December, 1909, pursuant to a vote of the Harvard Faculty of Arts and Sciences which gave effect to the report of a special committee, President Lowell and President Huntington of Boston University united in calling a meeting of representatives of the institutions in the neighborhood of Boston from which such instruction might be supplied, and in January, 1910, the "Commission on Extension Courses" was organized, consisting of representatives of the following institutions: —

Harvard University	Boston University
Tufts College	Museum of Fine Arts
Massachusetts Institute of Technology	Wellesley College
Boston College	Simmons College

The Harvard representative was made Chairman of the Commission, and it was understood that the administration of the courses would be provided by Harvard.

On the recommendation of this Commission the degree of Associate in Arts was established by Harvard, Radcliffe, Tufts,

and Wellesley, to be given on identical terms, and to be maintained equal to the Harvard degree of Bachelor of Arts in number of courses required, but without the exaction of any entrance examination or any academic residence.

The Commission arranged for 1910-11 a system of courses, given mainly by officers of the coöperating institutions, in which the Lowell Collegiate Courses and the courses of the Teachers' School of Science are included. The expense of these courses will be met partly from the students' fees, partly from the fund of the Lowell Institute, and in part from private gifts secured through the efforts of the Committee on Education of the Boston Chamber of Commerce, which has taken a strong interest in the matter.

The outcome of this is that there is now in operation in Boston a kind of extension college, giving courses which lead to an adequately guarded degree, and administered by the joint action of the neighboring colleges and other appropriate institutions. With further experience the arrangement ought to meet well the needs of Boston and the suburbs, so far as collegiate extension instruction is concerned. Not the least valuable and promising aspect of the movement is the fact that it has been possible in this matter to unite in full coöperation for this public service eight separate institutions.

In the current year over 800 students are regularly enrolled and at work in these courses. The Boston University Courses for Teachers are still continued independently, and have a larger number of students than ever before. They constitute a very valuable element in the total educational provision, and the two sets of courses will be carefully planned so as to supplement each other to the advantage of students.

III. EXTENSION STUDENTS IN REGULAR COURSES

Students in the courses of the Commission on Extension Courses are not registered in Harvard University or in Radcliffe College, even though receiving instruction from Harvard professors. Students in the Summer School are registered in the Summer School as a kind of special department, but are treated as affiliated students, not subject to the general regulations of the University, nor possessing any other privileges than those of the Summer School. In the course of the past year it has become evident that certain students admitted to regular courses in

term-time properly bear a relation to the University analogous to that of these affiliated students. Thus the courses Greek and Latin 5, Latin 15, and Geology 20a have been specially opened by the Faculty to teachers, to whom a reduced fee was charged. This class of students may be described as persons admitted to instruction, but mainly or primarily engaged in some other occupation than studying at Harvard. They are strictly Extension Students.

If these men are graduates of colleges, they are conveniently included in the list of students of one of the Graduate Schools under the Faculty of Arts and Sciences. Those who are not graduates it is not easy, or indeed possible, to subject to the same rules and oversight as the body of students under the charge of the Dean of Harvard College, and on the other hand there are certain privileges, such as the right of rooming in college dormitories, preference for football tickets, and the various advantages of the domestic life of the academic community, in which they will not naturally share. A considerable proportion of them owe their primary loyalty to other institutions, of which they are at the time members. The Faculty has accordingly voted that hereafter students (not being graduates of colleges) who are members of the Episcopal Theological School, the School for Social Workers, and the New England Conservatory of Music, shall be registered as Extension Students. The same principle will be applied to the members of other neighboring institutions.

It would seem desirable that the application of this principle should be extended, and that persons in other occupations or living at leisure (not being college graduates) who are allowed to take some work at Harvard, but are not candidates for the bachelor's degree, should be admitted by the Committee on Admission not, as at present, as Special Students in Harvard College, but as Extension Students under the Faculty of Arts and Sciences. In his relation to the University, there would seem to be no essential difference between a student at the New England Conservatory of Music taking a course at Harvard, and a neighboring music-teacher or organist who takes the same course. This arrangement would also seem a satisfactory one in the case of the occasional precocious boys who are able to take highly advanced work in some subject, but have not passed the entrance examinations, and who are, in general, too young to live away from their parents' immediate control.

It is to be hoped that the creation of this new class of Extension Students may serve both to render the body of Special Students more homogeneous, and to increase the possibility of providing instruction for mature men who have not been to college, but are well fitted to enter our courses and ought to be made welcome there.

The example of Harvard in encouraging such work may, it is to be hoped, stimulate Radcliffe College to put some of its courses at hours specially convenient for groups of neighboring school-teachers.

IV. OTHER UNIVERSITY EXTENSION

The work described above falls in greater or less degree under the Administrative Board for University Extension, and counts for the degree of A.A. In addition it is suitable here to mention the following Extension undertakings which are carried on by various departments of the University, and in most of which the courses are for various reasons not regularly accepted for the degree of A.A.

The Graduate School of Business Administration has specially set three of its courses, — Business 14 (Economic Resources and Commercial Organization of Central and South America), Business 17 (Industrial Organization), and Business 25 (Corporation Finance), — at 4.30 P.M., in order that men actively engaged in business may take them, and it receives such men, if of sufficient maturity even though not college graduates, as Special Students in the School.

Several of the research courses in Plant Breeding, Animal Breeding, and Economic Entomology at the Bussey Institution are given in the summer, and are available for instructors and advanced students in other institutions.

The Faculty of Divinity has for the past twelve years maintained in July a three weeks' Summer School open to women as well as men, and each winter conducts under the Lowell Institute a course of public Monday lectures on theological subjects in King's Chapel. A fair number of ministers settled over neighboring parishes are registered every year for one or more courses as Special Students or as Graduate Students in the Divinity School.

The Faculty of Medicine gives at the Medical School a course of free medical lectures — about thirty-five in number — on Saturday evenings and Sunday afternoons through the winter

for non-professional audiences. For students and practitioners it provides the Summer School of Medicine, in which, between June 1 and October 1, about one hundred different courses, both clinical and in laboratories, are offered. Many of these courses are open to women as well as men. For medical graduates (including practitioners) a very large number of graduate courses of varying length are offered by the Faculty of Medicine in the months of the academic year.

The Dental School in 1909-10 gave an evening course of lectures and demonstrations for practising dentists; and in 1910 a summer course, open to senior students, graduates, and practitioners, was given from June 28 to August 1. To this course women were admitted.

In addition to these extension undertakings a great number of public lectures are now given under the auspices of the University, both in Cambridge and at the Medical School in Boston. The courses of the Prussian Visiting Professor are usually open to the public, and, as in the current year, are often attended by large audiences.

JAMES HARDY ROPES, *Dean*.

RADCLIFFE COLLEGE

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — I have the honor to submit the report of Radcliffe College for the academic year 1909–10.

The number of students in actual attendance during the year was 485, as against 459 during the preceding year.

Graduate Students	66
Seniors	81
Juniors	52
Sophomores	70
Freshmen	82
Special Students	123
Unclassified Students	11
Total	485

At Commencement, in June, 1910, eighty-six students, four of whom had completed their residence in an earlier year, received the degree of Bachelor of Arts. Two students who had not been registered as Seniors received the degree, and one student who had been so registered failed to receive it. One of the eighty-six received the degree *summa cum laude*; five received it *magna cum laude*; thirty-four, *cum laude*.

Seventeen candidates received the degree of Master of Arts. Four of the seventeen had taken their first degree at Radcliffe; the others represented the following colleges: Smith College (three); Boston University (two); Bryn Mawr College (two); Colorado College, University of Maine, Missouri Valley College, University of New Brunswick, Pacific University, Western Reserve University (one each). Ten received the degree in English, two in the Classics, two in Romance Languages and Literatures, one in Germanic Languages and Literatures, one in Economics, and one in Zoölogy. Eight took four courses in 1909–10; two took four and a half; five who were engaged in teaching or in investigation and study distributed their work for the degree over two or three years, and thus took less than four courses in 1909–10; two who had taken full work in 1908–09 but had not received the degree made up deficiencies in 1909–10.

The degree of Doctor of Philosophy was conferred upon four candidates: Edith Nason Buckingham, A.B. (Radcliffe College) 1902, A.M. (*ibid.*) 1906, in the special field of Zoölogy; Maud Bassett Gorham, A.B. (Radcliffe College) 1902, A.M. (*ibid.*) 1906, in the special field of English Philology; Grace Eiler Marshall, A.B. (McMaster University) 1898, in the special field of Ethics; and Margaret Coleman Waites, A.B. (Radcliffe College) 1905, A.M. (*ibid.*) 1906, in the special field of Classical Philology.

Three hundred and eighty candidates presented themselves for examination. Twenty-eight were candidates for admission as special students. Forty-six candidates took part of the examination or worked off admission conditions. One hundred and eighty-four candidates took the preliminary examinations, and one hundred and twenty-two the final examinations. Twenty-seven candidates who took wholly or in part the examinations of the College Entrance Examination Board are included in the foregoing classification; of these students two were admitted to the Freshman Class.

The results of the final examinations are given in the following table: —

	Admitted	Admitted "Clear"	Rejected
June	70	34	8
September	29	6	11
	<hr/> 99		<hr/> 19
Total rejected	19		
Candidates in June who did not reappear in September	4		
	<hr/> 122		

Of the students who were refused admission to the Freshman Class, six were admitted *on probation* as special students.

The entering class of 1910-11 numbers eighty-eight, who were admitted, seventy-three by examination in 1910, eight in 1909, three in 1908, and four by the Committee on Admission from Other Colleges in 1910.

Sixty-six graduate students registered during the year 1909-10, forty of whom were from other colleges. Twenty-two students were admitted to nine whole courses, and twenty-six students to fifteen half-courses, of the "Courses primarily for Graduates in Harvard University open to competent students of Radcliffe College."

The Charles Eliot Norton Fellowship in Greek Studies in Harvard University was awarded in 1910 to a Radcliffe graduate student, Hetty Goldman, A.B. (Bryn Mawr) 1903. The Susan Anthony Potter Prize in Harvard University was awarded to a Radcliffe graduate student, Maud Elizabeth Temple, A.B. (Bryn Mawr) 1904, A.M. (*ibid.*) 1905. The Caroline I. Wilby Prize was awarded to Maud Bassett Gorham, Ph.D. 1910, for her Doctor's dissertation. The Captain Jonathan Fay Diploma and Scholarship were awarded to Emma Marshall Denkinger, 1910. The Fellowship in Economics, maintained in Radcliffe by the Women's Educational and Industrial Union of Boston, was awarded for 1910-11 to Lorinda Perry, A.B. (University of Illinois) 1909, A.M. (*ibid.*) 1910.

The members of the Academic Board for 1909-10 were Professor Byerly (Chairman), and Professors E. L. Mark, E. S. Sheldon, S. M. Macvane, H. S. White, E. H. Hall, H. W. Smyth, A. A. Howard, G. L. Kittredge.

Among the gifts for the year were: \$5000 from Mrs. George R. Emmerton of Salem, for a third hall of residence; \$450 from the Class of 1900, to start a fund for instruction; \$500 unrestricted from the Idler Club, on its twenty-fifth anniversary; \$1066.35 from Miss Irwin, the sum given in her honor by present and former students, the income to be at Miss Irwin's disposal; an additional \$1,000 from Mrs. Harriet Minot Pitman Laughlin, for the Harriet Minot Pitman Fund for the purchase of books on poetry and philosophy. A volume of interest was published in June, 1910, Radcliffe College Monograph No. 15, "Studies in English and Comparative Literature by former and present students of Radcliffe College," dedicated "to Agnes Irwin, Litt.D., LL.D., in recognition of her constant encouragement of advanced studies while Dean of Radcliffe College." The plan of this volume was originated by Professors Schofield, Kittredge, and F. N. Robinson, who gave generously of their time to bring it to successful completion.

An inventory taken in July, 1910, showed that the Radcliffe library contained 25,171 books, 79 boxes of pamphlets, 1,697 separate pamphlets, in addition to maps, photographs, and charts. The accessions in bound volumes for the year numbered 1,666. The lending of volumes in the summer to the Radcliffe students and graduates living in the vicinity, and even to those living at a distance, is increasing from year to year. In the summer of 1910 for the first time the library was open to the women of the

Harvard Summer School. The annual appropriation of \$1,200 which the College is able to make for the library is inadequate. The shelves of the new library make ample space for a large addition of books, and twice the annual appropriation could wisely be expended. Gifts, therefore, of money, or of books from a well chosen library, are much needed.

President Briggs, with the aid of the Student Government Association, arranged a series of mass meetings which all the students in College were urged to attend. The speakers in 1909-10 were as follows: President Briggs, President Lowell, Dr. R. C. Cabot, Miss Laura D. Gill, Dr. Alfred Worcester, and Mr. J. F. Moors. These meetings bring the students together for the consideration of serious subjects not academic, and enable them to hear and to meet men and women actively at work for the public good. Every address is followed by an informal reception.

Mr. Arthur Gilman, a valued and experienced Associate, died on December 28, 1909. He was the first and only Secretary of the Society for the Collegiate Instruction of Women, and Regent of Radcliffe College from its organization in 1894 until he withdrew in 1896. As far back as 1878 he realized that a broad education was needed by well trained young women, and he, with a few co-workers, was wise enough to prepare a way for its successful establishment by opening to properly qualified students the abundant treasures of Harvard College. The achievement of this undertaking was all the greater because he had no precedent in institutions already established in this country for the higher education of women. Mr. Gilman lived to see the growth of Radcliffe College, and the granting of the higher degrees. His name will always be intimately associated with the life of the College which he generously served.

There have been three resignations from the Associates: Miss Irwin, the first Dean of the College; Mrs. Arthur Gilman, a loyal worker from the beginning of the institution; and Ezra Ripley Thayer, Esq., an Associate and member of the Council since 1903. Mr. Thayer, on account of the pressure of other duties, resigned also from the Council, to the great regret of his colleagues.

On October 20, 1909, Mrs. Virginia Newhall Johnson, A.B. 1890, was elected Associate for three years. She was nominated by the Alumnae. On June 15, 1910, John Farwell Moors, Esq., was reelected member of the Council for seven years, and Mary Coes, A.B. 1887, A.M. 1897, was elected Dean.

The College awarded twenty-six scholarships for 1910-11. In addition to these the Radcliffe Choral Society awarded two scholarships of \$100 each, the Emmanuel Club one of \$200, and the Radcliffe Union awarded, as it did in 1909, the largest single room in Bertram Hall to a graduate student.

There are already over 1,100 Radcliffe Alumnae. Many of these young women go after graduation to distant parts of the country, either to live in their own homes or to engage in various occupations. As the number of Alumnae in and near the large cities has grown, Radcliffe Clubs have been founded in New York, Philadelphia, Providence, Washington, Chicago, and San Francisco. The first and largest of these, the New York Club, has established a Freshman scholarship in Radcliffe, which was awarded for the first time in 1909-10, and the clubs in Philadelphia, Washington, and Chicago are planning to offer scholarships in 1911-12. These scholarships are supported largely by annual subscriptions.

A new hall of residence to hold forty to forty-five students would do much to make available the superior advantages offered at Radcliffe, for many families at a distance prefer to have their daughters live under the daily supervision of the College. Fully convinced that a third hall of residence is essential to the best development of the College, a committee of the Council, aided by the Radcliffe Auxiliary, the Union, and the Alumnae, have undertaken to raise \$80,000. This gift, if it can be obtained, will be one of large practical value, and especially precious to the College because it is to bear the name of Mrs. Sarah Whitman, who was a loyal and constant helper of Radcliffe. \$10,000 have already been given or promised for Sarah Whitman Hall. The Council wishes to secure the whole sum at once, with the intention of having the building ready for use at the earliest possible date.

As a constantly increasing number of keen, eager students come to make use of the exceptional opportunities for study offered here, it is important that ample provision be made to maintain the close connection with Harvard which has given Radcliffe its distinctive character. In the early days the tuition fees were more nearly adequate than now to pay the expenses of the College. Since the College tries yearly to do more for the students by providing a wider range of electives, a library well filled with valuable books, and ample accommodations for board and lodging, it needs to call to an increasing extent on endowment.

It realizes that a truly liberal course of study means that it is necessary to secure, first of all, Harvard teachers who are leaders in their several departments of learning; and that in distributing the total expenditure for college maintenance, salaries of instructors ought to come first. It received gladly, therefore, the gift of the Class of 1900, a small sum intended to start a fund for instruction. A sum large enough to yield an income which shall enable the College to make an appreciable increase in the salaries of the instructors is difficult of attainment except through large endowment. The College has now in land, buildings, and endowment, \$1,700,000. Permission has been obtained from the Legislature to increase its holding from \$2,000,000 to \$5,000,000. Gifts or bequests of unrestricted principal are the greatest material need of the College.

MARY COES, *Dean*.

APPENDIX

REPORT OF THE CHAIRMAN OF THE COMMITTEE ON ADMISSION

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — I have the honor to submit to you my report as Chairman of the Committee on Admission. During the past year, the Committee have received and acted upon 1,003 applications for admission. The action of the Committee on these applications is indicated in the tables that immediately follow: —

Applications for Admission to the Freshman Class by Examination

Admitted without conditions	295	
Admitted with conditions	270	
<hr/>		
Total number admitted as Freshmen by examination	565	
Percentage admitted without conditions		52.2
Refused admission	176	
Percentage refused admission		22.3
Candidates in June who did not reappear in September to complete examinations	45	
<hr/>		
Total number of applicants	786	

Applications for Admission without Examination from Other Colleges and Scientific Schools

Admitted as Unclassified Students	99	
“ “ Freshmen	11	
“ “ Sophomores	12	
“ “ Juniors	14	
“ “ Seniors	3	
Refused admission	27	
<hr/>		
Total number of applicants	166	
Percentage admitted		83.7

Applications for Admission to Registration as Special Students

Admitted	29	
Refused admission	22	
<hr/>		
Total number of applicants	51	
Total number of applications of all kinds	1,003	
“ “ acted upon favorably	733	
<hr/>		
“ “ acted upon unfavorably	270	
Percentage of whole number admitted		73.0

In presenting my annual reports as Chairman of the Committee on Admission, it has seemed best to me to use the opportunity they give me to point out some of the ways in which the theories embodied in our rules for admission work out in actual practice. This leads me to seem, perhaps, to emphasize unduly the defects in our system ; but as my work gives me unusual advantages in seeing the effects of our regulations upon boys, teachers, and schools, it has seemed to me that I could be most useful by setting forth what I have learned from that experience. Without actual contact with individual applications for admission, no one, I believe, can realize the infinite variety of conditions to which our rules are applied ; and that contact reveals that college prescriptions — the wisdom of which no one would question considered by themselves — oftentimes have quite different effects from those they are intended, and supposed, to produce. For every item in our list of prescriptions for admission, it is possible to make almost unassailable arguments ; but the advocate of a particular prescription invariably overlooks the general effect of the sum total of all prescriptions. It is, indeed, something which can be learned only by the administration of admission.

This point can be made clear, I think, by recalling very briefly the changes that have taken place in our admission requirements. In 1870, our prescriptions included only three subjects — Greek, Latin, and Elementary Mathematics. These subjects, neither in number nor in extent, entirely occupied a school course. A school could give a boy all that the College asked for and still have time and opportunity to do other things which were regarded by the school and by its community as important for the boy's education. Since 1870, the College at different times has added to these three prescriptions the following subjects: English, a modern foreign language (French or German), History, and Science. During these years, also, the departments interested in these subjects, old and new, have industriously sought to increase the extent of the field in each subject. Every one of these changes, or rather additions, considered by itself, cannot be questioned as a good thing ; yet it is easy to see that taken all together they have deprived the school entirely of its freedom so far as boys going to college are concerned. The College, by means of these prescriptions, has gradually obtained a control over the whole school curriculum of the boy who wishes to go to college, leaving no room at all for the school itself to exercise its discretion or to do those things for a boy which the school's community believes should be done. This produces the irritating situation of a higher institution exercising without responsibility an authority over the acts of a lower institution for which that lower institution is held strictly accountable. In a given school, every boy who wants to go to college finds his four years of work rather minutely prescribed by the college he chooses. If this discipline imposed by the college does not work well in a given case, the school and not the college is blamed. For every one of its prescriptions, considered by itself, the College can plausibly urge that it is made in the interest of a sound education ; but any one whose work compels him to enforce these prescriptions, and who is thereby brought face to face with individual boys and teachers, soon learns that rules made for hypothetical boys do not work as they are supposed to work when applied to actual boys, and that the total effects of college prescriptions

in actual practice — every one of which, I repeat, is good considered by itself — may be summarized under the following heads, no one of which can certainly be regarded as characteristic of sound education: —

1. Over-pressure among students.
2. Restraint in using the best methods among teachers.
3. Distortion of curricula.
4. General emphasis on facts and knowledge rather than on thought and power.
5. Low standards of scholarship.

It was not, however, upon these effects of our admission system that I wished to dwell. I have called attention to them merely to emphasize the point which I wish to make, that regulations which considered by themselves seem unquestionably good may, when taken together with other regulations, exert effects quite contrary to those intended, and that there is a much greater discrepancy between our theory and its practical working than most people suppose. The effects to which I wish to call attention this year are the effects of our admission system upon quality of scholarship in Harvard College, none of which were intended, but which follow naturally from our regulations. Seventy-seven per cent of the whole number of young men admitted to undergraduate work are admitted to Harvard College by examination. The character of these young men, the parts of the country from which they come, the kinds of schools in which they have been trained, the attitude towards intellectual work that they bring with them, are all matters of vital importance to the scholarship of Harvard College. I wish to present some experience of the Committee on Admission which goes, I think, to show that our system tends: —

1. To restrict the field from which good students may be drawn, and therefore to depress the average quality of a class.
2. To confine within a restricted field the students selected to those who have received their training in a particular type of school.
3. To restrict our students to those who have been subjected to influences which help to make them look on study not as good in itself but merely for what it brings.

To illustrate the results of our system of admission with respect to the extent of the field from which we draw our students, I give below certain tables covering the last five years, and showing the relative number of students admitted from schools, both inside and outside of New England: —

	1906	1907	1908	1909	1910
Residence in New England	354	388	354	357	359
Residence outside of New England, but prepared in New England schools	97	88	64	100	98
Total prepared in New England schools	451	476	418	457	457
Prepared in schools outside New England	125	118	111	116	108
Total number admitted	576	594	529	573	565
Percentage of students from outside New England	21%	19%	20%	20%	19%

A further examination of the numbers prepared in schools outside of New England shows that the greater number of them come from the states adjacent to New England. The distribution is as follows: —

	1906	1907	1908	1909	1910
New York	65	66	50	66	58
New Jersey					
Pennsylvania					
South Atlantic States	9	7	4	10	6
Western States	10	14	5	4	4
North Central States	37	24	46	33	33
South Central States	0	2	4	1	1
Foreign Countries	4	2	0	0	4
Insular Possessions	0	3	2	2	2
	<hr/> 125	<hr/> 118	<hr/> 111	<hr/> 116	<hr/> 108

These figures certainly suggest that there is an intimate connection between our system of admission and the schools from which our students come. A system which operates in such a way as to confine our choice of students to those who live in New England and to those who though their homes are outside of New England can afford to come to New England schools cannot fail to have consequences with respect to scholarship in Harvard College. In so far as our choice of students is restricted to a small section of the country, and to particular schools, we are prevented from getting students of good quality. Anything which restricts the range of choice lowers the average quality of men chosen in each successive class. There are, of course, other reasons beside our system of admission to account for the fact shown by the figures above; but any one who administers correspondence about admission will soon learn that the system of admission is the most powerful factor in producing these facts.

Our system works not only in such a way as to restrict our choice of students to those living in this part of the country, but also to restrict our students to the type of school known as the "preparatory school," as distinct from the public high school. If we examine still further the figures given above, it appears that by far the greater majority of men admitted from New England are trained in the schools of Middlesex County. There are in Massachusetts 265 high schools; but even taking so long a period as ten years our records show that students have entered Harvard College from only 119 of these schools, and of these 28 have sent only one man in ten years. The greater part of our students come from schools that are of the preparatory type, either private or endowed schools, or those public schools which are so near the University that their character is determined by college prescriptions. Disregarding the fact that a public school, by reason of University influence, may be practically a preparatory school, the percentages of applicants for admission to Harvard, admitted during the last five years, are as follows: —

	1906	1907	1908	1909	1910
Percentage of candidates, public schools	40.4	42.4	45.3	45.5	43.0
Percentage of candidates, private and endowed schools	59.4	57.4	54.5	54.4	56.9

These figures indicate a larger percentage of candidates from schools of the public school type than is actually the case. The figures given above for public schools include all men who have been admitted from the Boston, Cambridge, and Somerville Latin Schools, which are really college preparatory schools governed by the same motives that govern the private and endowed schools. A truer idea of the small number of public school men is given by the following percentages: —

	1906	1907	1908	1909	1910
Public schools	28.2	30.6	34.0	35.4	30.0
" Preparatory " schools	71.7	69.1	65.9	64.5	69.9

In the last ten years, we have had at least one man a year from not more than fourteen high schools out of all in the United States ; and every one of these fourteen is in Massachusetts.

The different tables given above indicate, I believe, that our system of admission in its practical working tends to restrict students in Harvard College to those whose school training has been within the small part of the country which can come under the direct influence of our system of admission, and within that field to students who have been trained in the type of school known as the preparatory school. To this latter fact, I attribute some effects on the scholarship of Harvard College which are not susceptible of proof, but which my experience compels me to regard as true.

No matter how wisely a preparatory school is conducted, no matter how enthusiastic and devoted the teachers, the attitude of the boys towards study is largely determined by the practical end of getting into college. They are sent for that purpose ; and the teachers must emphasize the college examinations. Though a teacher may do his best to teach a subject instead of cram for an examination, the fact that his work will be judged by examination results compels him to train for examinations. In the administration of admission to college, it is very noticeable that as a class teachers in preparatory schools desire the college to specify minutely what boys must do in order to obtain admission to college, the reason being that they have found college requirements the most effective arguments in persuading boys to work. Boys in preparatory schools, therefore, have constantly put before them an end of study which is outside the study itself. When they come to college, they look upon their college work in the same way : in school, they study to get into college ; in college, they study to get a degree ; in both, they economize energy by doing as little as will accomplish the purpose. Contact with many hundreds of these youths, both before and after they enter College, has convinced me that the lack of interest in intellectual pursuits of which we complain in our students is due to

the fact that the majority of them spend the most impressionable years of their lives in an atmosphere in which study is regarded not as an end desirable in itself, but as a means to the practical end of getting into college. In saying this, I do not mean to blame the preparatory schools; for they are the results of a system for which I believe the present college requirements for admission are responsible.

The reason why we are confined in our selection of students to a very small section of the country, and within that section to those who are trained in "preparatory" rather than public schools is, as I have partly explained above, that we have a system which attempts to control by examinations the whole school course of a boy during the four years preceding his entrance to college. A moment's reflection will convince anyone that we cannot do this successfully except (1) when the boy knows at or near the beginning of his school course that he is coming to Harvard, and has time, therefore, to plan accordingly, and (2) when he attends a school so near the University that it is sure to contain each year a number of boys who are planning to enter Harvard. The truth is that we are trying to apply a system adapted to a time when the College drew only from local schools which had no aim except to prepare for college, to national conditions, and schools in which preparation for the examinations of a particular college would be an impertinence. The net result of this method of procedure on our part is poor scholarship in Harvard College.

I should like to illustrate the points which I have tried to make above by actual cases which will show how our methods virtually exclude exceptionally fine students, and how difficult it is for the Committee on Admission to administer a scheme which is essentially quantitative in such a way as to select for the College men of good quality. When admission requirements are discussed in the Faculty, the debate usually turns on a particular subject or the way of teaching it; but the work of the Committee on Admission is the practical work of selecting students. Very little of that work is necessary to convince one that you cannot select good students by prescribing what and how they shall study. To illustrate this, I will give first the programme of a boy who attended a school whose curriculum has always been determined by our requirements for admission. The numbers at the right of the subjects indicate the school periods per week given to the study.

First Year	Second Year	Third Year	Fourth Year
English . . 3	English . . 3	English . . 3	English . . 3
History . . 2	History . . 2	History . . 2	Latin . . . 4
French . . . 3	French . . . 3	French . . . 3	Greek . . . 5
Latin . . . 6	Latin . . . 4	Latin . . . 4	Mathematics 4
Botany . . . 1	Greek . . . 5	Greek . . . 5	Physics . . . 4
Mathematics 4	Mathematics 3	Mathematics 3	
—	—	—	—
19	20	20	20

This boy entered Harvard easily without conditions, dividing his examinations between two years. His record was mostly made up of unsatisfactory grades — he had no grade higher than C, and only three C's out of ten grades. His record thus far in College indicates that he is not a desirable student.

I will give now the programme of a boy in a high school in Minnesota. I wish to call attention to the fact that though he has worked at a higher rate he would be rated by our system much lower than the man above.

First Year	Second Year	Third Year	Fourth Year
English . . . 5	English . . . 5	English . . . 5	English . . . 5
Algebra . . . 5	Algebra and	Geometry	Physics . . . 7
German . . . 10	Geometry . . . 5	(Plane and	Latin . . . 10
French . . . 10	German . . . 5	Solid) . . . 5	
	French . . . 5	German . . . 5	
		French . . . 5	
—	—	—	—
30	20	20	22

Concerning this boy, the headmaster of his school wrote as follows: —

This student is at the head of our class of 180. He made an average of 94%. He took Harvard examinations in subjects which he had pursued at the High School, and passed with high marks, but could not gain admission to Harvard because he had not studied Latin. He is now taking double work in Latin, and hopes to complete two years' work before the summer is over, and will probably go to Cornell next fall.

If this student had taken our examinations, the best record that his studies and our method of rating them would have permitted him to make would have been a record of nineteen points. If he had done this, and the Committee on Admission, in view of what they had learned of his quality, had exercised their discretion and admitted him with conditions, he would be required to work for his degree at the rate of twenty-one courses as compared with the seventeen and a half exacted of the dull man referred to above.

I wish to give one more illustration which I think is even better of the way our theories work for the exclusion of brilliant students. The case I select is that of a student in a high school in Detroit.

First Year	Second Year	Third Year	Fourth Year
Algebra . . . 5	Algebra . . . 5	Geometry . . . 5	Geometry . . . 3
Latin 5	Latin 5	French 5	$\frac{1}{2}$ Coll. Algebra 4
Anc. History . 4	Phys. Geogr. . 4	Chemistry . . . 5	$\frac{1}{2}$ Trig. 4
English 4	Mech. Drawing 4	English 4	Physics 5
			$\frac{1}{2}$ Adv. Chem. . 10
			$\frac{1}{2}$ Solid Geom. . 3
			$\frac{1}{2}$ German . . . 5

Of this student, the headmaster of his school writes as follows (the italics are mine) :

I am enclosing at your request an outline of the work pursued by the most brilliant pupil in our graduating class this year. *You will observe that his course would not permit him to enter Harvard College.* When Mr. — was here a year ago he asked me to notify the University of any young man here who gave great promise in any particular subject, as the University would be glad to offer such a student inducement to go to Harvard. This young man is the brightest mathematician I have known during my twenty-five years in high schools. As an illustration of his ability, during the past year he has read by himself, as recreation, most of the Differential and Integral Calculus; and he has also done reading in Analytical Geometry. He has done what would be regarded as advanced work in college Chemistry. If you care to know more in regard to this young man I shall be glad to give you further information.

It is hard to say what this student could have done if he had wished to come to Harvard. By our examinations, he could hardly have made a record of more than sixteen points, not because he has not done more work, but because our system would give him barely a chance to show what he has done in languages, and no chance at all to show wherein he is strongest. If by some lucky chance the Committee on Admission got an opportunity to pilot him through the shoals and bars of our admission requirements they would be obliged to admit him under conditions which would stamp him as inferior to dull boys like the one I mentioned first, and of whom there is a large number, and to make him work at a rate of more than twenty courses for his degree.

These cases are only two of a large number which correspondence about admission continually reveals, and are examples of thousands we never hear of. From men like these, our present regulations for admission cut us off, and operate in favor of dull and indifferent students like the man whose school programme I gave first.

In view of these facts, it seems to me that one who is constantly occupied with the actual business of admitting students, or of explaining how they can or cannot be admitted to the privileges of the College, may be permitted a certain impatience and exasperation at the waste of good material he is compelled to witness. It would be perfectly possible in a few years to have as many students of the type I last mentioned as we now have indifferent students if the Committee on Admission were empowered to admit men *by merit alone*. Any committee of the Faculty that was free to act after collecting facts about an applicant's school record and examining him in those subjects in which he is best able to show his quality could choose for the Faculty a body of students that would relieve teaching of all its drudgery, and make it a perpetual delight. The scholarship of Harvard College depends more on the men we choose than on anything we can do after we get them. The present method of choice, intricate and complex, working in obscure ways, cuts us off from thousands of good students, and depresses the quality of those we get.

I append the following statistics drawn from the records of the Committee on Admission: —

1. Average ages for last five years of men (a) admitted without conditions, (b) admitted with conditions, and (c) refused admission.
2. Choice of examination subjects made by men admitted in 1910.
3. Values in points of examinations offered and passed by men admitted in 1910.
4. Values in points of examinations passed by applicants who were refused admission in 1910.
5. Percentages of conditions in prescribed subjects among men admitted in 1910.
6. Percentage showing the marking of the June examinations of applicants for admission arranged in such a way as to show (a) the percentage of honor marks — A and B ; (b) the percentage of satisfactory grades — A, B, and C ; (c) the percentage of unsatisfactory grades — D, E, and F ; (d) the percentage of merely passing grade — D ; and (e) the percentage of failure — E and F.
7. Classification of candidates, both final and preliminary, for 1910 according to residence.
8. Classification of men who have actually entered Harvard during the last ten years according to the kinds of schools they have attended and the parts of the country from which they have come.

JOHN GODDARD HART,
Chairman of the Committee on Admission.

TABLE I

AVERAGE AGES FOR LAST FIVE YEARS OF MEN

(a) ADMITTED WITHOUT CONDITIONS

(b) ADMITTED WITH CONDITIONS

(c) REFUSED ADMISSION

	1906	1907	1908	1909	1910
Admitted without conditions . .	18.42	18.32	18.34	18.31	18.51
Admitted with conditions . . .	18.98	18.89	18.86	18.94	18.98
Refused admission	18.94	19.32	19.31	19.18	19.32

TABLE II

CHOICE OF EXAMINATION SUBJECTS MADE BY MEN
ADMITTED IN 1910

Elementary		Advanced	
English	519	Greek	142
Greek	254	Latin	371
Latin	534	German	249
German	372	French	365
French	496	History	
History		English	14
Ancient	496	American	77
Modern	62	Ancient	2
Algebra	561	European	12
Plane Geometry	506	American and	
Geometry	50	English	0
Physics	459	Algebra	66
Chemistry	185	Solid Geometry	131
Anatomy	15	Logarithms	140
Harmony	27	Astronomy	2
Geography	36	Counterpoint	2
Botany	29	English A	123
Zoölogy	30		
Civil Government	61		
Economics	24		
Freehand Drawing	18		
Projection Drawing	22		
Blacksmithing	14		
Chipping	13		
Machine Work	14		
Woodworking	15		

TABLE III
VALUES IN POINTS OF EXAMINATIONS OFFERED
AND PASSED BY MEN ADMITTED IN 1910

Candidates for the Degree of A.B.

Points Offered	Men	Points Passed	Men
18	1	16	2
20	3	18	1
21	1	19	1
22	11	20	28
23	6	21	7
24	37	22	47
25	12	23	24
26	252	24	83
27	41	25	23
28	89	26	197
29	17	27	26
30	21	28	45
31	6	29	7
32	6	30	10
33	3	31	3
		32	2
	506		506

The average number of points offered
by candidates for the degree of A.B.
was 26.5.

The average number of points passed
by candidates for the degree of A.B.
was 25.0.

Candidates for the Degree of S.B.

Points Offered	Men	Points Passed	Men
22	2	18	1
23	2	19	1
24	8	20	6
25	4	21	6
26	21	22	10
27	9	23	4
28	6	24	9
29	4	25	2
30	2	26	12
31	0	27	4
32	1	28	3
		29	1
	59		59

The average number of points offered
by candidates for the degree of S.B.
was 26.2.

The average number of points passed
by candidates for the degree of S.B.
was 23.6.

TABLE IV

VALUES IN POINTS OF EXAMINATIONS PASSED BY APPLICANTS
WHO WERE REFUSED ADMISSION IN 1910

Points	A.B.	S.B.	Points	A.B.	S.B.
0	3	2	12	9	1
2	4	0	13	2	3
3	0	1	14	14	2
4	3	1	15	6	4
5	0	2	16	8	4
6	11	4	17	6	6
7	1	0	18	31	7
8	6	3	19	7	3
9	1	0	20	5	0
10	8	2	21	1	0
11	3	1	22	1	0
				<hr/>	<hr/>
				130	46

TABLE V

PERCENTAGES OF CONDITIONS IN PRESCRIBED SUBJECTS
AMONG MEN ADMITTED IN 1910

Candidates for A.B.		Candidates for S.B.	
English	4.1	English	6.7
Greek or Latin	1.1	German or French . . .	8.4
German or French . . .	1.5	German and French . .	1.6
History	3.9	History	15.2
Algebra	4.1	Algebra	6.7
Plane Geometry	8.3	Plane Geometry	10.1
Science	13.6	Science	5.0

TABLE VI

PERCENTAGES SHOWING MARKINGS OF THE JUNE, 1910, FINAL
EXAMINATIONS

	A and B	A, B, and C	D, E, and F	D	E and F
Elementary English	2.7	21.4	78.5	31.5	47.0
“ Greek	7.9	39.6	60.3	49.2	11.1
“ Latin	9.1	38.1	61.8	22.2	39.6
“ German	7.3	33.1	66.8	40.0	26.8
“ French	7.8	33.6	66.3	30.2	36.0
Ancient History	1.4	8.7	91.2	51.4	39.8
Modern History	3.0	9.0	90.9	24.2	66.6
Elementary Algebra	20.7	40.9	59.0	21.1	37.8
Plane Geometry	12.6	24.6	75.3	38.8	36.5
Geometry	24.5	54.7	45.2	28.3	16.9
Physics	38.0	58.0	41.9	14.5	27.4
Chemistry	14.0	54.0	46.0	20.0	26.0
Anatomy	28.5	42.8	57.1	00.0	57.1
Botany	7.6	61.5	38.4	38.4	00.0
Geography	00.0	27.2	72.7	9.0	63.6
Zoölogy	41.6	66.6	33.3	33.3	00.0
Civil Government	00.0	8.8	91.1	44.4	46.6
Economics	4.5	4.5	95.4	31.8	63.6
Freehand Drawing	00.0	00.0	100.0	33.3	66.6
Projection “	28.5	64.2	35.7	7.1	28.5
Blacksmithing	30.7	76.9	23.0	23.0	00.0
Chipping, etc.	23.0	61.5	38.4	38.4	00.0
Machine Tool Work	27.7	72.2	27.7	16.6	11.1
Woodworking	46.1	100.0	00.0	00.0	00.0
Harmony	00.0	20.0	80.0	40.0	40.0
English A	11.6	19.4	80.5	20.3	60.1
Advanced Greek	12.9	52.7	47.2	36.1	11.1
“ Latin	19.5	55.3	44.6	20.8	23.7
“ German	5.3	26.6	73.3	47.9	25.4
“ French	3.0	33.5	66.4	30.1	36.3
American History	3.4	17.2	82.7	46.5	36.2
English History	00.0	00.0	100.0	60.0	40.0
Ancient History	00.0	00.0	100.0	40.0	60.0
European History	20.0	20.0	80.0	00.0	80.0
Advanced Algebra	23.8	45.2	54.7	7.1	47.6
Logarithms	15.7	35.3	64.6	30.0	34.5
Solid Geometry	33.6	57.5	42.4	15.0	27.4
Astronomy	00.0	00.0	100.0	00.0	100.0
Counterpoint	00.0	50.0	50.0	00.0	50.0

TABLE VII

CLASSIFICATION OF CANDIDATES, BOTH FINAL AND PRELIMINARY,
FOR 1910, ACCORDING TO RESIDENCE

<i>North Atlantic Division</i>		<i>North Central Division (Continued)</i>	
Maine	18	Minnesota	11
New Hampshire	25	Iowa	8
Vermont	3	Missouri	11
Massachusetts	1,298	South Dakota	1
Rhode Island	17	Nebraska	5
Connecticut	20	Kansas	3
<hr/>		<hr/>	
New England	1,381		166
New York	234	<i>South Central Division</i>	
New Jersey	40	Kentucky	4
Pennsylvania	65	Tennessee	1
	<hr/>	Alabama	3
	1,720	Louisiana	2
<hr/>		Texas	5
<i>South Atlantic Division</i>		Arkansas	4
Delaware	1		<hr/>
Maryland	12		19
District of Columbia	16	<i>Foreign</i>	
Virginia	1	Canada	3
West Virginia	2	China	1
Florida	2	Cuba	1
Georgia	4	England	2
South Carolina	1	France	1
	<hr/>	Germany	3
	39	Honduras	1
<i>Western Division</i>		Japan	2
Montana	4	Mexico	3
Colorado	6		<hr/>
Utah	1		17
Idaho	1	<i>Insular Territories and</i>	
Washington	10	<i>Dependencies</i>	
Oregon	6	Canal Zone, Panama	1
California	18	Hawaii	9
	<hr/>	Porto Rico	1
	46		<hr/>
<i>North Central Division</i>			11
Ohio	42	<i>Home Unknown</i>	
Indiana	10		2
Illinois	52		<hr/>
Michigan	12	Total	2,020
Wisconsin	11		

TABLE VIII

CLASSIFICATION OF MEN WHO HAVE ACTUALLY ENTERED HARVARD
DURING THE LAST TEN YEARS ACCORDING TO THE KINDS OF
SCHOOLS THEY HAVE ATTENDED AND THE PARTS OF
THE COUNTRY FROM WHICH THEY HAVE COME

<i>Public Schools</i>										
	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910
New England . . .	185	238	208	187	173	180	199	173	193	182
Total North Atlantic, including New England	210	258	230	213	193	195	224	189	215	201
South Atlantic . . .	2	6	3	3	2	3	2	1	4	3
Western	0	4	2	3	2	3	2	3	4	1
North Central . . .	15	21	12	15	8	12	10	14	18	12
South Central . . .	3	1	1	1	0	0	0	2	0	0
Total United States .	230	290	248	235	205	213	238	209	241	217
Foreign	0	0	0	0	0	0	0	0	0	0
Insular Territories and Dependencies	0	0	0	0	0	0	0	0	1	0
<i>Private and Endowed Schools</i>										
	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910
New England . . .	246	227	215	204	217	244	217	184	207	228
Total North Atlantic, including New England	295	294	260	268	263	301	261	226	245	263
South Atlantic . . .	7	7	5	3	2	6	1	2	3	2
Western	7	1	4	1	3	3	11	2	0	2
North Central . . .	26	19	15	16	17	14	12	19	17	12
South Central . . .	4	4	0	1	0	0	2	0	0	1
Total United States .	339	325	284	289	285	324	287	249	265	280
Foreign	3	0	8	0	2	2	1	3	1	8
Insular Territories and Dependencies	0	0	0	2	1	0	3	2	1	2

REPORT OF THE MEDICAL ADVISER

TO THE PRESIDENT OF THE UNIVERSITY: —

SIR, — I have the honor to present in tabular form a report of the work of the Medical Adviser for the academic year 1909–10.

The figures in the "Graduate" column of Table II include a few medical students, but sick medical and dental students are seldom cared for at the Infirmary or by the Medical Adviser.

The five hundred and seventy-five Infirmary patients are included in Tables I and II.

The "percentage of sign-offs" among College students is not to be compared with the figures given for Graduate Students, for the reason that practically all illnesses among College students are necessarily recorded in the Medical Adviser's office, while the same is not true of the Graduate Students. It is probable that a majority of minor illnesses among students in the Graduate Schools is not reported to the Medical Adviser. It will be noticed that there is no such marked difference between the undergraduates and graduates in the percentage of students who are ill enough to go to the Infirmary.

Of thirty-six cases of appendicitis, with nineteen operations at the Infirmary, all made good recoveries.

The three deaths at the Infirmary were as follows: —

Stafford Hammond, April 10, tuberculosis.

Maurice MacPherson, May 13, pneumonia.

Professor Charles Gross, December 3.

Hammond was a Christian Scientist and did not seek medical aid until twelve days before his death.

Other deaths among students were as follows: —

George Kneeland Munroe, April 28, some mastoid complication.

Warren Bard, July 2, drowned.

Thomas Savage Bowles, August 14, pneumonia.

MARSHALL H. BAILEY, *Medical Adviser.*

TABLE I.
ILLNESS REPORT, 1909-10.

Diseases	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May.	June.	Total
Appendicitis	3	7	9	11	6	7	5	3	3	54
Asthma	2	1	1	..	..	1	..	5
Bronchitis	2	5	4	8	3	10	2	2	1	37
Chicken-pox	1	..	1	..	1	4	2	9
Colds—unclassified	14	29	25	47	30	52	16	32	1	246
Coryza	2	2	3	..	4	4	1	..	16
Diarrhoea	8	4	3	4	1	3	2	2	..	27
Diphtheria	1	..	..	2	..	..	..	..	3
Ear, of the	1	..	5	2	2	3	3	1	2	19
Eye, of the	9	6	10	8	6	12	12	15	3	81
General Debility . . .	1	3	12	7	9	17	24	20	17	3	113
Headache	4	1	5	1	..	3	3	4	1	22
Heart, of the	2	..	..	..	..	2	..	1	..	5
Indigestion	10	22	6	15	6	14	11	10	1	95
Insomnia	2	1	2	2	..	..	..	1	8
Jaundice	4	1	..	1	..	2	..	..	..	8
La Grippe	7	12	22	22	32	70	20	8	1	194
Laryngitis	1	1	3	2	1	1	..	..	9
Malaria	1	..	1	..	..	1	..	..	..	3
Measles	1	4	3	5	7	..	..	20
“ German	2	3	13	6	4	..	28
Miscellaneous	1	37	54	48	36	32	44	35	39	11	337
Mumps	1	1	6	11	4	2	2	2	2	31
Neuralgia	3	..	3	..	..	..	..	2	8
Pharyngitis	2	1	1	2	2	5	2	2	..	17
Pneumonia	1	5	2	1	1	1	..	11
Rheumatism	1	..	2	3	3	4	1	2	1	..	17
Scarlet Fever	8	..	1	9
Skin, of the	2	3	..	3	3	3	4	1	..	19
Surgical	28	30	42	40	18	36	26	34	8	262
Teeth, of the	1	2	3	5	3	8	2	6	..	30
Tonsilitis	17	14	73	26	20	26	22	14	3	215
Tuberculosis	2	..	..	1	..	1	..	..	..	4
Typhoid	2	..	..	..	..	1	..	..	..	3
Totals	3	160	215	282	278	205	354	217	205	46	1965
Visits	75	74	141	197	176	178	108	191	57	1197
Office consultations, medical	5	198	232	344	316	261	426	248	293	133	2456
Office consultations, surgical	1	80	111	80	218	90	141	99	131	59	1010
Total number of con- sultations	6	353	417	565	731	527	745	455	615	249	4663

Cases not seen by the Medical Adviser 639

TABLE II

ILLNESS REPORT AS RELATED TO THE DIFFERENT SCHOOLS

Diseases	College						Sci- entif.	Instructors	Law	Graduate	Divinity	Totals
	1	2	3	4	Sp.	Un.						
Appendicitis	11	10	12	5	..	5	1	1	4	5	..	54
Asthma	3	..	..	1	..	..	1	..	..	..	..	5
Bronchitis	8	9	6	7	1	..	..	..	2	4	..	37
Chicken-pox	2	3	..	3	..	..	..	..	..	1	..	9
Colds, unclassified	74	67	53	31	5	7	..	1	3	5	..	246
Coryza	8	4	2	1	..	1	..	..	..	..	..	16
Diarrhoea	6	8	9	3	..	..	..	..	1	..	..	27
Diphtheria . . . . .	..	..	..	..	..	1	..	..	2	..	..	3
Ear, of the	3	6	2	2	1	2	1	..	..	2	..	19
Eye, of the	24	23	19	8	1	5	..	..	..	1	..	81
General Debility	25	10	36	22	6	3	..	1	2	8	..	113
Headache	6	4	8	3	..	1	..	..	..	..	..	22
Heart, of the	2	1	..	2	..	..	..	..	..	..	..	5
Indigestion	29	20	17	17	4	1	..	..	4	3	..	95
Insomnia	2	..	1	1	..	..	..	..	1	3	..	8
Jaundice	4	1	..	2	..	1	..	..	..	..	..	8
La Grippe	49	46	34	21	6	4	..	2	23	8	1	194
Laryngitis	2	2	3	..	1	..	..	1	..	..	..	9
Malaria	1	..	1	..	..	..	..	..	..	1	..	3
Measles	10	2	1	3	..	..	..	2	2	..	..	20
“ German	4	4	3	4	2	1	1	..	9	..	..	28
Miscellaneous	90	81	61	40	11	5	..	2	28	17	2	337
Mumps	5	8	3	3	..	..	..	..	5	7	..	31
Neuralgia	2	1	2	2	..	1	..	..	..	..	..	8
Pharyngitis	6	6	3	1	..	1	..	..	..	..	..	17
Pneumonia	5	1	1	3	..	..	..	..	1	..	..	11
Rheumatism	6	2	4	2	..	..	..	..	2	1	..	17
Scarlet Fever	2	3	..	1	..	..	..	..	..	3	..	9
Skin, of the	6	5	2	3	..	..	..	..	1	2	..	19
Surgical	80	62	51	26	5	9	1	2	15	9	2	262
Teeth, of the	16	7	2	4	..	1	..	..	..	..	..	30
Tonsilitis	55	43	42	32	2	6	..	3	20	11	1	215
Tuberculosis	1	2	..	..	..	..	..	..	..	..	1	4
Typhoid . . . . .	..	..	2	1	..	..	..	..	..	..	..	3
Totals	547	441	380	254	45	55	5	13	125	93	7	1965
No. of Students	664	499	505	367	126	104	12	..	763	590	49	
% of “Sign-offs”	67	88	75	69	36	53	42	..	16	16	14	
No. of Students at Infirmary	126	89	76	75	12	25	2	12	102	52	2	
% of “Sign-offs”	19	18	15	20	10	24	17	..	14	9	4	

TABLE III
STILLMAN INFIRMARY

LIST OF CASES, 1909-10

Abscess-mastoid	1	Miscellaneous Surgical	46
“ peritonsillar	5	Mumps	25
“ miscellaneous	11	Otitis Media	11
Appendicitis	36	Pharyngitis	6
Bronchitis	20	Pneumonia	5
Chicken-pox	7	Poliomyelitis-anterior	1
Colds — unclassified	33	Rheumatism	3
Diphtheria	3	Scarlet Fever	3
Dislocations	2	Sepsis	16
Enteritis	5	Sprains	7
Fractures	3	Synovitis	9
Hernia	2	Tonsillectomy	8
Jaundice	5	Tonsillitis	83
La Grippe	77	Tuberculosis	4
Malaria	4	Wounds	6
Measles	10	No diagnosis	20
“ German	25		—
Miscellaneous Medical	73	Total	575

Room patients	102
Ward patients	473
Total	575

Discharged—well	400
“ relieved	168
“ not relieved	3
“ against advice	1
Died	3
Total	575

Total number of hospital days	3,827
Daily average	14.05

Total number of operations	55
Operations for Appendicitis	19

REPORT OF THE SECRETARY FOR APPOINTMENTS

TO THE PRESIDENT OF THE UNIVERSITY:—

SIR,—I have the honor to submit to you a report of the Appointments Office for the year ending September 30, 1910.

As in the past the work of the Appointments Office has been divided into two parts: I, Permanent Work; II, Temporary Work.

I. PERMANENT WORK

In the case of almost all teaching positions filled through the Appointments Office the various Departments of the University have either acted directly or been consulted. Due credit has been given the Departments in this report for positions they have secured independently of the Appointments Office.

To a somewhat lesser degree the Departments have acted through or been consulted by the Harvard Alumni Association in relation to technical business positions. Reference has been made to all such cases.

Of necessity the work of the various Departments, the Harvard Alumni Association and the Appointments Office is closely allied.

(A) Registration of Teachers and Business Men:—

	1910	1909
Harvard Appointments Office — Teaching		
Active	1,970 ¹	2,020
Inactive	266	267
Harvard Alumni Association — Business	1,575	1,417
Total	3,811	3,704

(B) Calls for Teachers upon the Appointments Office:—

	1910	1909
Direct, from Schools, Colleges, and Universities . .	491	582
Indirect, through Teachers' Agencies	129	180
Total	620	762

(C) Calls from Business Houses upon the Harvard Alumni Association:—

	1910	1909
Total	231	213

¹ The decrease in the number of teachers registered may be accounted for by the discarding of some applications which have become entirely inactive in the case of teachers who have received permanent appointments or who have given up teaching for business.

(D) Permanent Teaching, Administrative, and Educational Positions filled by the various Departments in coöperation with the Appointments Office:—

	Positions	Salaries
Universities or Colleges:		
Regular Teachers	82	\$97,624 ¹
Substitute Teachers	10	10,950
Total	92	\$108,574
Technical Schools	11	14,875
Normal Schools	4	5,260
Normal and Collegiate School for Negroes	1	850
Public High Schools	12	11,850
Private Schools	31	42,700
Tutors or Companions (one year)	2	3,750
Superintendents of Schools	5	9,150
Head-masters or Principals	7	13,200
Total	165	\$210,209

(E) Permanent Business Positions filled by the Harvard Alumni Association:—

	Positions	Salaries
Banking Houses	2	\$ 456
Brokerage Firms	2	520
Business Manager	1	5,000
Commercial Agent	1	1,200
Construction Company	1	416
Cotton Buyers	4	2,340
Department Store	1	520
Editors	2	1,820
Electrical Company	1	1,200
Insurance	1	416
Journalist	1	780
Law Office	1	520
Library Assistant	1	540
Manufacturing Concerns	10	5,137
Publishing Houses	3	2,080
Secretaries	6	9,180
Superintendent	1	1,800
Wholesale Dealers	2 ²	520
Wool Commissioner	1	208
Total	42	\$34,653

¹ Salaries of three men not reported.

² One salary not reported.

(F) Permanent Business Positions (Technical) filled by the Harvard Alumni Association: —

	Positions	Salaries
Architect	1	\$ 780
Chemists	3	4,200
Foreign Correspondent	1	520
Engineer, Constructive	1	1,825
“ Electrical	1	520
“ Mechanical	3	3,072
Total	10	\$10,917

(G) Business Positions filled by the Departments of the University: —

Department of	Number of Positions filled	Number of Positions, Salary reported	Salaries
Astronomy	1	1	\$ 1,000.00
Botany	1		
Business	3	2	1,440.00
Chemistry ¹	2	2	2,600.00
Economics	1	1	3,600.00
Engineering ²	9	8	9,638.40
Forestry	5	4	4,540.00
Total	22	18	\$22,818.40

(H) Total number of Permanent Positions filled in 1910 as compared with 1909 by the Appointments Office in coöperation with the various Departments of the University, or by the Departments independently, as far as reported to the Appointments Office, or by the Harvard Alumni Association: —

	1910		1909	
Permanent Teaching, Educational and Administrative Positions	165	\$210,209.00	509 ³	
Permanent Business Positions filled by the Harvard Alumni Association	42	34,653.00	45	
Permanent Business Technical Positions filled by the Harvard Alumni Association	10	10,917.00	17	
Permanent Business Positions filled by the Departments of the University	22	22,818.40	—	
Total	239	\$278,597.40 ⁴	571	\$364,974.12 ⁵

¹ One position filled in coöperation with the Harvard Alumni Association.

² Two positions filled in coöperation with the Harvard Alumni Association.

³ Salaries not computed under these divisions in 1909.

⁴ Salaries of eight men not reported.

⁵ Salaries of seven men not reported.

The large decrease in positions filled in 1910 as compared with those filled in 1909 can be accounted for by the fact that no Harvard University positions were counted in 1910, whereas, in 1909, 266 Harvard University positions were counted.

No attempt has been made this year to compare the report table by table with last year, as so many changes were made in the form of the report that it would have been impracticable.

The following tables (*I*) and (*J*) are a recapitulation of the foregoing tables, showing the positions filled by the various Departments of the University according to single and combined subjects:—

(*I*) SINGLE SUBJECTS

Botany	3	Latin	5
Chemistry	7	Law	2
Economics	8	Mathematics	10
Education	1	Music	1
Engineering	1	Philosophy	1
English	27	Physics	2
French	5	Physical Training	5
Geology	1	Political Science	1
German	8	Psychology	5
Greek	2	Zoölogy	2
History	14		
Italian	1	Total	112

(*J*) COMBINED SUBJECTS

Ancient Languages	1
Classics	6
Chemistry, Physiology, and Geometry	1
English and Geometry	1
English, French, Algebra, and Geometry	1
English and Public Speaking	1
French and German	4
French and Music	1
General Teacher	2
Latin and German	2
History and Government	1
Mathematics and Physics	3
Chemistry and Physiography	1
English, French, and Latin	1
Latin, Greek, and German	1
German and History	1
Germanic Languages	1
French, German, Latin, and Greek	1
Physics and Chemistry	1
Romance Languages	6
Science	2
Total	39

(K) GEOGRAPHICAL DISTRIBUTION

	University or College	Technical School	Normal School	Public School	Private School	Tutors or Com- panions, 1 yr.	Superinten- dents	Head-masters or Principals	Business	Business Technical	Totals for States
NORTH ATLANTIC DIVISION:											
Maine	5	..	..	1	..	..	1	..	..	..	7
New Hampshire	3	..	..	..	1	..	..	..	1	..	5
Vermont	3	1	..	..	..	..	..	..	..	..	4
Massachusetts	1	16	..	7	13	..	4	3	33	9	86
Rhode Island . . . . .	..	..	..	..	1	..	..	..	..	..	1
Connecticut	1	..	..	1	2	..	..	..	..	..	4
New York	10	..	..	1	4	..	..	..	8	6	29
New Jersey	3	..	..	..	3	..	..	..	1	1	8
Pennsylvania	4	1	1	..	1	..	..	..	..	3	10
SOUTH ATLANTIC DIVISION:											
Maryland . . . . .	..	..	..	..	2	..	..	..	..	..	2
District of Columbia . . . . .	..	..	..	..	..	..	..	..	1	3	4
West Virginia	1	..	..	..	..	..	..	1	..	..	2
North Carolina	4	..	1	..	1	..	..	..	..	..	6
Georgia . . . . .	..	1	..	..	..	..	..	..	..	..	1
Florida	1	..	..	..	..	..	..	..	..	..	1
SOUTH CENTRAL DIVISION:											
Kentucky . . . . .	..	..	..	1	1	..	..	..	..	..	2
Texas	2	..	..	..	..	..	..	..	..	..	2
NORTH CENTRAL DIVISION:											
Ohio	7	..	..	1	..	..	..	1	..	1	10
Indiana	3	..	..	..	..	..	..	..	..	..	3
Illinois	6	..	..	..	1	..	..	..	..	1	8
Michigan	1	1	..	..	..	..	..	..	..	..	2
Wisconsin	4	..	1	..	..	..	..	..	..	..	5
Minnesota	3	..	..	..	..	..	..	..	..	..	3
North Dakota . . . . .	..	..	..	..	..	..	..	..	..	1	1
Iowa	1	1	..	..	..	..	..	..	..	..	2
Missouri	3	2	..	..	..	..	..	1	..	2	8
Kansas	1	..	2	..	..	..	..	..	..	..	3
WESTERN DIVISION:											
Colorado	3	..	..	..	..	..	..	1	..	..	4
Utah . . . . .	..	1	..	..	..	..	..	..	..	..	1
Nevada	1	..	..	..	..	..	..	..	..	..	1
Oregon . . . . .	..	..	..	..	..	..	..	..	..	1	1
Washington	4	..	..	..	..	..	..	..	..	..	4
California	1	..	..	..	..	..	..	..	..	..	1
CANADA	2	..	..	..	1	..	..	..	..	1	4
ENGLAND . . . . .	..	..	..	..	..	..	..	..	1	..	1
CHINA	1	..	..	..	..	..	..	..	..	..	1
EUROPE (or general travel) . . . . .	..	..	..	..	..	2	..	..	..	..	2
Total positions	79	24	5	12	31	2	5	7	45	29	239

II. TEMPORARY WORK

More attention has been given to this department than ever before, and an attempt has been made to secure statistics showing the amount of money earned by the men in the various occupations and the amount of time spent in earning the money.

The average mark of the men who secured work through the office was found to be *B—*. The averages obtained by men in the different occupations are listed in two tables (*P*) and (*Q*) below.

Owing to inadequate machinery when the first attempt to secure these statistics was made, it is impossible to present them in as concise a form as will be possible another year.

No attempt has been made to compare this year's statistics with last year's, as new methods of counting have been introduced that would make any comparison unfair. On the whole, there has been a slight increase in the temporary work.

(L)

Number of men registered for term-time work	560
Number of men who secured term-time work	436
Number of men registered for summer work	584
Number of men who secured summer work	204
Total registration for term-time and summer work, allowing for men registered for both	956 ¹

(M) The division of the registration among the different Departments of the University is as follows:—

College	611	Dental	6
Medical	22	Scientific	7
Law	122	Extension	5
Graduate	136	Unclassified	28
Business Administration	13		
Divinity	6	Total	956

(N)

Amount earned by 436 men through the aid of the office during term-time	\$45,699.32
Amount earned by 204 men through the aid of the office during the summer	20,062.40
Total amount earned through the aid of the office	\$65,761.72
² Total amount earned independently by men registered with the office, during the year	71,088.05
Total amount earned by men registered with the office	136,849.77

¹ 188 duplicate registrations.

² To about 700 inquiries 503 replies were received.

The following table shows the number of temporary positions filled —
2,290 in all: —

(O) TEMPORARY WORK

Accountant	1	Inspector	2
Advertiser	4	Janitor	1
Agent	3	Meter Reader	55
Attendant	2	Monitor	179
Boatman	1	Musician	12
Bookkeeper	1	Night School Teacher	2
Boston 1915 Exhibit	7	Outing Class Teacher	4
Camp Councillor, tutor	4	Painter	1
Canvasser	2	Playground Director	5
Caretaker	2	Proctor (examination)	115
Carpenter	1	Proof-reader	2
Cataloguer	10	Reader	20
Chauffeur	2	Room for Services	3
Choreman	65	Scene Shifter, Chair Mover, etc.	8
Clerk	352	Secretary	6
Coach	2	Settlement Worker	8
Companion	15	Snow Shoveller	5
Computer	1	Solicitor	42
Conductor	1	Statistician	7
Custodian	1	Stenographer	23
Destroyer of Tree Pests	2	Store Clerk	29
Draftsman	10	Substitute for Schools	8
Elevator Man	1	Summer School Teacher	1
Engineer	1	Supervisor of Study	53
Engrosser	1	Supervisor and Tutor	5
Errandman	101	Teller	10
Expressman	5	Ticket Taker	383
Farm Hand	3	Time Keeper	1
Furnace Tender	4	Translator	8
Gardener	5	Tutor and Companion	45
Genealogist	1	Tutor (special subjects)	127
General Man on Estate	2	Typewriter	138
Guard, Gate Keeper, Usher	32	Waiter	235
Guide	93		
Hotel Employee	9		
			<hr/> 2,290

(P) TERM-TIME EMPLOYMENT

First half-year

September 30, 1909 — January 27, 1910

Positions	No. of positions	Hours	Amount	Number of men employed	Average No. of hours worked per man	Average amount earned per man	Average final mark of men employed
Advertiser	2	39	\$24.00	2	19½	\$12.00	C+
Boston 1915 Exhibit	7	350	94.40	6	58½	15.73	B-
Carpenter	1	1½	.35	1	1½	.35	D+
Cataloguer	2	83½	43.13	2	41½	21.56	B-
Choreman	25	193½	41.70	14	13½	2.98	C+
Clerk	176	7,065	2,221.23	92	76½	24.14	C+
Coach	2	66	105.00	2	33	52.50	B+
Companion	7	133	55.50	4	8½	9.63	B-
Computer	1	6½	1.63	1	6½	1.63	B
Draftsman	8	1185	103.40	5	37	17.58	B-
Errandman	56	189	31.60	41	2	.77	C+
Expressman	5	166	35.00	5	33	7.00	C+
Furnace Tender	4	117	12.25	2	8½	2.13	B-
Gardener	1	2½	.65	1	2½	.65	B-
Gate Keeper, Guard, Usher, Guide	34	1,069	139.35	30	35½	4.65	B-
Janitor	1	..	27.00	1	..	27.00	B
Meter Reader	17	..	703.46	13	..	54.11	C+
Monitor	82	470½	564.60	81	5½	6.97	B-
Musician	6	45	32.00	5	9	5.80	C+
Night School Teacher . . .	2	182	127.44	1	82	75.44	B
Outing Class Teacher . . .	2	160½	152.00	1	60½	80.00	C+
Painter	1	4	1.00	1	4	1.00	C+
Proctor	25	122½	131.16	25	4½	5.25	B+
Proof-reader	2	329	67.50	2	164½	33.75	C-
Reader	8	166½	59.18	8	20½	7.39	B-
Scene Shifter, Chair Mover, etc.	8	12½	31.09	3	1	1.00	B-
Secretary	3	169½	153.42	2	35	26.03	B-
Snow Shoveller	5	17	1.83	4	1½	.45	B-
Settlement Worker	5	..	139.25	5	..	27.85	B-
Solicitor	38	11,001	505.04	34	29½	14.20	C+
Statistician	6	1101	154.56	3	33½	9.52	B-
Stenographer	12	139	159.52	4	9½	9.57	B-
Store Clerk	29	11,326	388.66	27	49	14.39	B-
Substitute for Schools . . .	1	80	125.00	1	80	125.00	B-
Supervisor	21	..	1,165.00	14	..	83.21	B-
Teller	9	64	36.00	9	7	4.00	B-
Ticket Taker	54	..	247.50	54	..	4.58	B-
Translator	7	21	12.00	5	4	2.40	C+
Tutor	31	767½	1,672.22	31	22½	53.94	B-
Typewriter	78	..	570.69	26	..	21.95	B-
Waiter	115	18,445	4,895.52	110	167½	43.10	C+
	899	32,569	\$15,031.83				

¹ Statistics compiled upon number of men who reported only. Ten men have not reported.

(Q) TERM-TIME EMPLOYMENT

Second half-year

January 28, 1910 — June 28, 1910

Positions	No. of positions	Hours	Amount	Number of men employed	Average No. of hours worked per man	Average amount earned per man	Average mark of men employed
Accountant	1	7	\$1.75	1	7	\$1.75	B -
Advertiser	1	14	13.50	1	14	13.50	C +
Agent	1	..	75.00	1	..	75.00	C
Canvasser	2	5	2.00	2	2½	1.00	B -
Cataloguer	6	2,481	1,196.45	5	496	239.29	B -
Chauffeur	1	..	150.00	1	..	150.00	B -
Choreman	31	243½	77.49	20	12	3.87	C +
Clerk	136	2,713	773.55	88	30½	8.78	C +
Companion	3	..	561.20	3	..	187.06	B -
Conductor	1	770	161.84	1	770	161.84	C +
Destroyer of Tree Pests . . .	2	125	25.00	2	62½	12.50	C +
Draftsman	1	16	4.80	1	16	4.80	B -
Elevator man	1	20	1.90	1	20	1.90	C -
Engineer	1	..	50.00	1	..	50.00	†
Engrosser	1	1½	.50	1	1½	.50	B +
Errandman	45	75	19.59	37	2	.53	C +
Gardener	4	35½	7.60	3	11½	2.53	B -
Genealogist	1	8	2.00	1	8	2.00	B +
Guard	8	..	144.00	8	..	18.00	C +
Guide	13	116	69.25	13	8½	5.32	B -
Inspector	1	..	5.00	1	..	5.00	A -
Meter Reader	38	..	1,732.55	37	..	46.82	C +
Monitor	97	..	662.80	93	..	7.12	B -
Musician	6	173	156.00	5	34½	31.20	C +
Outing Class Teacher	2	..	103.00	2	..	51.50	C +
Playground Director	1	..	108.00	1	..	108.00	A
Proctor	75	2,233½	2,233.90	74	30	30.18	B +
Reader	12	154	77.75	10	15½	7.78	B -
Room for Services	2	..	20.00	2	..	10.00	C +
Secretary	3	..	166.49	3	..	55.49	B -
Settlement Worker	2	..	256.20	2	..	128.10	B -
Solicitor	4	1705	178.00	4	235	59.33	C +
Statistician	1	..	38.40	1	..	38.40	B -
Stenographer	9	238	235.63	6	39½	39.27	B -
Substitute for Schools	7	..	1,085.00	7	..	155.00	B -
Supervisor	32	..	12,113.55	25	..	91.89	B -
Supervisor and Tutor	5	..	12,400.00	2	..	1,200.00	†
Teller	1	..	5.00	1	..	5.00	B -
Ticket Taker	329	..	641.00	329	..	1.95	B -
Translator	1	1	1.50	1	1	1.50	C +
Tutor	53	1,793½	3,622.10	42	42½	86.24	B -
Tutor and Companion	10	..	5,627.50	10	..	562.75	B -
Typewriter	59	..	352.37	31	..	11.37	B -
Waiter	120	121,242½	5,508.33	112	191½	49.62	C +
	1,130	33,171½	\$30,667.49				

¹ Statistics compiled upon number of men who reported only. 13 men have not reported.

² Dagger (†) indicates men not in college 1909-10.

(R) SUMMER EMPLOYMENT

June 29, 1910 — September 30, 1910

Positions	No. of positions	Hours	Amount	Number of men employed	Average No. of hours worked per man	Average amount earned per man
Advertiser	1	49	\$12.25	1	49	\$12.25
Agent	2	..	95.60	2	..	47.80
Attendant	2	40	10.50	2	20	5.25
Boatman	1	..	100.00	1	..	100.00
Bookkeeper	1	..	55.00	1	..	55.00
Camp Councillor, Tutor	4	..	715.00	4	..	178.75
Caretaker	2	..	393.33	2	..	196.66
Cataloguer	2	1,152	230.00	2	576	115.00
Chauffeur	1	..	54.00	1	..	54.00
Choreman	9	118½	29.40	8	14½	3.67
Clerk	40	1,827	629.08	35	52	17.97
Companion	5	..	948.75	5	..	189.75
Custodian	1	..	1.00	1	..	1.00
Draftsman	1	49½	14.78	1	49½	14.78
Farm Hand	3	..	35.75	2	..	17.87
General Man on Estate	2	..	135.50	2	..	67.75
Guide	70	4,625½	1,391.80	51	90	27.23
Hotel Employee	9	..	726.66	9	..	80.74
Inspector	1	..	220.00	1	..	220.00
Playground Director	4	..	210.00	4	..	52.50
Proctor	15	197½	197.75	15	13	13.18
Room for Services	1	..	15.00	1	..	15.00
Settlement Worker	1	..	120.00	1	..	120.00
Stenographer	2	101½	50.75	2	50½	25.38
Summer School Teacher	1	..	250.00	1	..	250.00
Time Keeper	1	..	99.00	1	..	99.00
Tutor	43	1,767½	3,369.25	35	50½	96.23
Tutor and Companion	35	..	9,948.25	34	..	292.59
Typewriter	1	..	5.00	1	..	5.00
	261	9,928½	\$20,063.40			

(S) SUMMER EMPLOYMENT

Positions filled by the Departments of the University independently

Department of	Number of Positions filled	Number of Positions, Salary reported	Salaries
Business	8	7	\$788
Economics	1	1	658
Forestry	6	6	1,548
Total	15	14	\$2,994

ROGER ALDEN DERBY,
Secretary for Employment.

ORDINARY DEGREES CONFERRED, 1906-10

	1906	1907	1908	1909	1910
Bachelors of Arts	374	448	379	421	452
Bachelors of Arts out of course	52	63	60	73	52
Bachelors of Science	62	79	50	60	57
Bachelors of Science out of course	13	17	10	13	12
Bachelors of Divinity	6	7	12	12	6
Bachelors of Divinity out of course	0	0	0	0	0
Bachelors of Laws	178	183	159	163	182
Bachelors of Laws out of course	13	23	13	14	11
Bachelors of Agricultural Science	2	6	7	5	1
Bachelors of Agricultural Science out of course	0	2	0	0	1
Doctors of Medicine	80	70	69	55	73
Doctors of Medicine out of course	1	0	2	3	0
Doctors of Dental Medicine	34	24	18	10	24
Doctors of Dental Medicine out of course	0	0	0	5	0
Masters of Arts	110	124	116	112	142
Masters of Arts out of course	4	8	8	7	0
Masters of Science	3	2	4	3	4
Masters of Science out of course	0	0	0	0	0
Doctors of Philosophy	46	33	43	38	37
Doctors of Science	0	1	0	0	0
Metallurgical Engineers	0	0	0	0	0
Mining Engineers	3	1	3	5	3
Masters in Civil Engineering	0	2	1	2	1
Masters in Mechanical Engineering	0	0	3	0	4
Masters in Electrical Engineering	0	0	1	3	4
Masters in Electrical Engineering out of course	0	0	0	0	1
Masters in Architecture	0	2	1	2	2
Masters in Landscape Architecture	0	1	1	0	1
Masters in Forestry	0	2	4	5	3
Masters in Business Administration	0	0	0	0	8
Totals	981	1098	964	1011	1081

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TREASURER'S STATEMENT

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TREASURER'S STATEMENT FOR 1909-10

TO THE BOARD OF OVERSEERS OF HARVARD COLLEGE: —

The Treasurer submits the annual statement of the financial affairs of the University, for the eleven months ending June 30, 1910.

The net income of the general investments for this period was divided at the rate of 4 per cent. among the Funds to which these investments belong.

From the income of all bonds bought at a premium for general investments \$10,215.19 was credited to the various accounts concerned, and for special investments \$1,858.12, as the fair yearly repayment to make good the premiums at the maturity of the bonds.

CHARLES F. ADAMS, 2D, *Treasurer.*

Boston, January, 1911.

EXHIBIT A

BALANCE SHEET

June 30, 1910

ASSETS

CASH IN BANKS:

Bursar,	\$41,370.03	
Treasurer — General,	167,028.77	
Treasurer — Special — Schedule 1,	<u>7,092.47</u>	\$215,491.27

ACCOUNTS RECEIVABLE:

Term Bills of January, 1910,	\$1,243.01	
Term Bills of June, 1910,	129,646.35	
Sundry accounts of Bursar's office,	10,101.20	
Interest accrued,	<u>1,243.05</u>	142,233.61

INVENTORY — Stores,	8,410.69
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INSURANCE UNEXPIRED,	4,222.05
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INVESTMENTS:

Securities — Special — Schedule 1,	\$2,646,296.83	
Securities — General — Schedule 2,	16,113,308.53	
Land and Buildings — Special — Schedule 1,	1,405,813.58	
Land and Buildings — General — Schedule 3,	<u>2,946,960.02</u>	23,112,378.96

\$23,482,736.58

NOTE. — Owing to the change in the closing date of the fiscal year from July 31 to June 30, the restricted income for the month of July, 1910, amounting to \$175,530.31, which would have been available in a fiscal year of twelve months, is excluded from the figures for the fiscal year ended June 30, 1910.

EXHIBIT A

BALANCE SHEET

June 30, 1910

LIABILITIES

ACCOUNTS PAYABLE:

Salaries and Aids,	\$232,215.22	
Deposits and Advance Payments,	10,995.45	\$243,210.67

CAPITAL:

Gains and Losses for General Investments,		580,121.63
Income on General Investments Unapportioned,		163.64
Funds and Gifts, August 1, 1909,	\$22,023,695.65	
General Suspense, August 1, 1909,	28,771.30	
	<u>\$21,994,924.35</u>	

Gifts for Capital — Exhibit D, \$581,450.14

Gains and losses in valuation
of Special Investments, . . 65,728.17Unexpended balances of appro-
priations charged as expense
in prior years, now credited:

College, 7,234.52

Medical School, 6,775.52

Unexpended balances of new

gifts for buildings, 197,949.39 859,137.74

\$22,854,062.09

General Deficit — Exhibit B, 194,821.45

Funds and Gifts — June 30, 1910,

Schedule 4, \$22,766,854.54

General Suspense, Credit

Balances, June 30, 1910,

Schedule 5, 130,969.32

\$22,897,823.86

Less General Suspense, Debit

Balances, June 30, 1910,

Schedule 6, 238,583.22 \$22,659,240.64 22,659,240.64

\$23,482,736.58

CONSOLIDATED STATEMENT OF INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

RESTRICTED INCOME :

From SPECIAL INVESTMENTS,

Interest and Dividends — Schedule 1,	\$90,021.28	
Rents of Land and Buildings, . . .	\$133,585.20	
Less Operating Expenses,	75,471.81	58,113.39
Net income — Schedule 1,		\$148,134.67

From GENERAL INVESTMENTS,

Interest and Dividends on

Securities — Schedule 2,	\$579,762.54	
Bank Balances,	3,634.02	
Advances to Departments and Miscellaneous,	12,979.81	\$596,376.37

Rents of Land and Buildings, . . .	\$223,836.72	
Less Operating Expenses,	84,244.29	
Net Income — Schedule 3,		139,592.43

Total Income General Investments,	\$735,968.80	
Less balance remaining after apportion- ment to the Funds and Gifts,		20.12

Net Income General Investments appor- tioned,		735,948.68
--	--	-------------------

Gifts for Immediate Use — Exhibit E, \$447,287.74

Less Unexpended balances of new gifts for buildings, added to Funds and Gifts — Exhibit A,	197,949.39	249,338.35
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Sales of Publications, Materials, etc.		38,085.60
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GENERAL INCOME :

Tuition Fees,	\$639,655.07	
Laboratory Fees,	32,208.86	
Other Fees,	64,240.98	
Gross Rents of College Dormitories, etc.	92,383.67	
Sales of Publications, Materials, etc.	24,444.78	852,933.36

\$2,024,440.66

General Deficit — to Exhibit A	194,821.45	
--	------------	--

\$2,219,262.11

NOTE. — Owing to the change in the closing date of the fiscal year from July 31 to June 30, the restricted income for the month of July, 1910, amounting to \$175,530.31, which would have been available in a fiscal year of twelve months, is excluded from the figures for the fiscal year ended June 30, 1910.

CONSOLIDATED STATEMENT OF INCOME AND EXPENDITURE

For the year ended June 30, 1910

EXPENDITURE

From RESTRICTED INCOME for:

Administrative Purposes,	\$5,862.97	
Educational Purposes,	362,336.16	
Other Activities,	521,832.21	
Aids,	<u>139,591.17</u>	\$1,029,622.51

From GENERAL INCOME for:

Administrative Purposes,	\$113,505.04	
Educational Purposes,	869,401.98	
Other Activities,	69,700.23	
Aids,	<u>12,787.00</u>	1,065,394.25

Repairs and equipment of College dormitories, .	\$6,478.21	
Caretaking and operating expenses of College dormitories,	<u>26,956.91</u>	33,435.12
Repairs and equipment of land and buildings for general purposes,	\$26,680.40	
Caretaking and operating expenses of land and buildings for general purposes,	<u>64,129.83</u>	90,810.23

\$2,219,262.11

INCOME AND EXPENDITURE

For the year ended

	INCOME		
	Restricted	General	Total
University (Sch. 7),	\$58,224.31	\$8,971.00	\$67,195.31
College, including Graduate Schools (Sch. 8),	431,409.42	577,432.44	1,008,841.86
Library (Sch. 9),	55,490.68	112.11	55,602.79
Graduate School of Business Adminis- tration (Sch. 11),	25,906.88	15,399.22	41,306.10
Divinity School (Sch. 12),	30,305.25	9,315.28	39,620.53
Law School (Sch. 13),	32,341.13	113,575.00	145,916.13
Medical School (Sch. 14),	157,540.56	77,551.80	235,092.36
Dental School (Sch. 15),	2,720.24	19,248.41	21,968.65
Bussey Institution (Sch. 16),	14,213.20	.....	14,213.20
Arnold Arboretum (Sch. 17),	45,256.94	.....	45,256.94
Botanic Garden (Sch. 18),	12,791.79	.....	12,791.79
Botanical Museum (Sch. 19),	1,569.10	.....	1,569.10
Gray Herbarium (Sch. 20),	16,045.18	.....	16,045.18
Observatory (Sch. 21),	43,889.09	.....	43,889.09
Museum of Comp. Zoölogy (Sch. 22), Peabody Museum of American Archae- ology and Ethnology (Sch. 23), . .	30,743.51	.....	30,743.51
Semitic Museum (Sch. 24),	10,148.19	.....	10,148.19
Germanic Museum (Sch. 25),	15,611.31	.....	15,611.31
William Hayes Fogg Art Museum (Sch. 26),	2,573.47	.....	2,573.47
Appleton Chapel (Sch. 27),	9,260.67	.....	9,260.67
Phillips Brooks House (Sch. 28), . .	8,053.33	.....	8,053.33
Hemenway Gymnasium (Sch. 29), . .	1,372.96	.....	1,372.96
Stillman Infirmary (Sch. 30), . . . . .	.....	2,153.25	2,153.25
Funds and Gifts for Special Purposes (Sch. 31), . . \$369,791.77	3,274.16	19,598.40	22,872.56
Less Unexpended balances of new gifts for buildings, 197,949.39	171,842.38	.....	171,842.38
Less Deficits of the follow- ing departments included in the above expenditure of other departments and deducted to show the total net expenditure :			
Appleton Chapel (Sch. 27), \$10,516.08			
Hemenway Gym. (Sch. 29), 10,084.05			
	<u>\$1,180,583.75</u>	<u>\$843,356.91</u>	<u>\$2,023,940.66</u>

NOTE. — Owing to the change in the closing date of the fiscal year from July 31 to June 30, the restricted income for the month of July, 1910, amounting to \$175,530.31, which would have been available in a fiscal year of twelve months, is excluded from the figures for the fiscal year ended June 30, 1910.

EXHIBIT C

BY DEPARTMENTS

June 30, 1910

EXPENDITURE	GENERAL		Disposition of General Deficit or Surplus			
	Deficit	Surplus	FUNDS AND GIFTS		GENERAL SUSPENSE	
			Debit	Credit	Debit	Credit
\$51,007.86	.....	\$16,187.45	.....	\$16,187.45	.....	.....
1,089,197.68	80,355.82	.....	99,048.30	19,618.62	987.73	61.59
86,773.23	31,170.44	.....	32,077.56	2,393.83	1,486.71	.....
28,927.19	.....	12,378.91	.....	575.00	.....	11,803.91
36,368.53	.....	3,252.00	.....	1,018.56	.....	2,233.44
117,066.61	.....	28,849.52	.....	3,785.74	.....	25,063.78
259,635.55	24,543.19	.....	.....	820.82	25,364.01	.....
33,889.42	11,920.77	.....	1,000.00	49.16	10,969.93	.....
26,596.67	12,383.47	.....	.....	.....	12,383.47	.....
48,179.42	2,922.48	.....	4,133.83	1,211.35	.....	.....
6,800.65	.....	5,991.14	.....	30.01	.....	5,961.13
1,503.18	.....	65.92	.....	65.92	.....	.....
17,669.00	1,623.82	.....	40.42	.....	1,583.40	.....
57,226.28	13,337.19	.....	13,408.98	1,524.12	1,452.33	.....
37,383.42	6,639.91	.....	154.60	116.40	6,601.71	.....
11,370.45	1,222.26	.....	666.62	.....	555.64	.....
22,480.59	6,869.28	.....	7,542.06	672.78	.....	.....
1,550.32	.....	1,023.15	.....	1,050.59	27.44	.....
18,981.73	9,721.06	.....	9,248.88	.....	472.18	.....
18,569.41	.....	.....	.....	.....	.....	.....
1,380.74	7.78	.....	267.74	259.96	.....	.....
12,237.30	.....	.....	.....	.....	.....	.....
21,557.59	.....	1,314.97	.....	297.24	.....	1,017.73
233,009.42	61,167.04	.....	.....	20,618.89	81,785.93	.....
\$2,239,362.24						
20,600.13						
\$2,218,762.11	\$263,884.51	\$69,063.06	\$167,588.99	\$70,296.44	\$143,670.48	\$46,141.58
	69,063.06		70,296.44		46,141.58	
	\$194,821.45		\$97,292.55		\$97,528.90	

GIFTS FOR CAPITAL

June 30, 1910

ESTABLISHING NEW FUNDS OR INCREASING OLD ONES

From the estate of James Barr Ames, of the Class of 1868, of Cambridge, Mass., \$10,000, to constitute the principal of the Ames Fund. "The income shall annually be paid to the Dean of the Harvard Law School or in default of a Dean to some member of the Faculty of the Harvard Law School, to be used at the discretion of that Faculty for the benefit of the School. No other accounting shall be required for the expenditure of the income than the receipt of the Dean or other member of the Faculty of the Law School who receives the same, that it has been received by him to be used for the benefit of the School in such ways as may seem advisable to its Faculty for the time being."

From an anonymous giver, securities valued at \$44,000, without restriction beyond the payment of a certain annuity.

For addition to the principal of the Fund for the Professorship of Hygiene, \$14,000, from the anonymous founder of this Fund.

For the Arnold Arboretum Fund, from

Henry P. Curtis	\$10
B. F. Keith	110
Massachusetts Society for Promoting Agriculture . .	500
	<u>\$620</u>

From Winthrop Ames, \$1,000, to be added to the "Lowell Fund for a Botanic Garden."

From Mrs. William S. Bullard, \$25,000 additional, "In accordance with the expressed wish of my son, Stephen Bullard, lately deceased, and as a gift from him, . . . to be added to the endowment fund of the Bullard Professorship of Neuropathology"

From members of the Class of 1881, \$1,360, to be added to the "Twenty-fifth Anniversary Fund of the Class of 1881."

From members of the Class of 1882, \$5,624.65, to be added to the Fund of the Class of 1882, established on the twenty-fifth anniversary of their graduation.

From members of the Class of 1883, \$4,829.33, to be added to the "Class of 1883 Fund," established on the twenty-fifth anniversary of their graduation.

From members of the Class of 1884, \$15,000, to be added to the "Class of 1884 Fund," established on the twenty-fifth anniversary of their graduation.

From members of the Class of 1885, to commemorate the twenty-fifth anniversary of their graduation, \$105,097.01, which with the additional gifts pledged, increasing the amount to \$111,839.68, "shall be designated as the 'Class of 1885 Gift,' the principal to be permanently invested with the general funds of the University, the income only to be used for the benefit of Harvard College; but without other restriction."

From the estate of John Clarence Cutter, securities valued at \$13,319.75, the net income, after the payment of a certain annuity, to be used under specified conditions for an annual course of free public lectures which shall be called the "Cutter Lectures on Preventive Medicine" and shall be delivered in Boston, Massachusetts.

From the estate of Emma Howe Proctor, \$500, for the general purposes of the Dental School.

From Mrs. Robert D. Evans, \$5,000, to be added to the Dental School Endowment Fund.

From William F. Drea, \$10, towards the Class of 1909 Dental Endowment Fund.

From Edwin Ginn, \$100, to be added to the Charles Follen Folsom Memorial Fund in the Medical School.

From Adolphus Busch, \$50,000 additional to his gift for the erection of a new building for the Germanic Museum. This gift is not restricted to endowment, but by vote of the President and Fellows it is to be so held, the income to be used for the maintenance of the new building.

From Mrs. Arthur W. Blake, \$450, to be added to the F. B. Greenough Fund for Surgical Research.

Through the Harvard Medical Alumni Association, \$500, to be added to the principal of the Harvard Medical Alumni Fund, established in 1907 by the Association. The income of the Fund is to be added to the principal, or applied to increase the salary of one or more of the younger instructors in the Medical School, or to be applied otherwise in accordance with the wishes of the Association.

From Henry L. Higginson, \$50,000 additional, for the general purposes of the University.

From Jose Brunetti y Gayoso, Duke of Arcos, and Virginia Woodbury Lowery Brunetti, Duchess of Arcos, in memory of their brother, Woodbury Lowery of the Class of 1875, \$20,000, "to be held as a perpetual fund bearing his name, the income to be awarded from year to year by the President and Fellows to some person, preferably an instructor or graduate of Harvard University, to enable him to carry on research in historical archives, preferably those relating to American History in the archives of foreign countries and more particularly in Spain. The income for any one year may be all awarded to one person, or in parts to more than one person, as the President and Fellows may deem best. In case there is in any year no person to whom they think it wise to award it, the income for that year may be held in reserve to be used at a later time, or may be added to the principal."

From Mrs. Charles Elliott Perkins, \$30,000, to establish, in memory of her husband, scholarships in Harvard University for students from Iowa, "the scholarships to be forever known and designated as the 'Charles Elliott Perkins Scholarships.'"

". . . It is my desire that the benefits of this foundation shall be open to those desiring a so-called classical or liberal education, and to those desiring to fit themselves for the professions; and especially that young men who intend to pursue technical studies in preparation for a career in business or engineering may be encouraged by these scholarships to precede their technical studies, or combine them, with such liberal studies as shall contribute to their breadth of view,

sympathy with all humane interests, and capacity for ultimate leadership."

In fulfilment of the purpose above described, the giver desires the income of the fund to be divided among four or more scholarships, in accordance with the terms of trust, which provide, as follows, in part:—

"I. One undergraduate scholarship of at least \$300, to be offered annually to bona fide residents of Des Moines County upon graduation from the Burlington High School, . . . If no award is made, or the recipient fails to be admitted, the income is to be added to the principal.

"II. Two undergraduate scholarships of \$300 each, to be offered annually to students from Iowa high schools, . . .

"III. One graduate scholarship of \$300, to be offered each year to a graduate of an Iowa college or university in any of the graduate or professional departments of Harvard University.

"In case the income of the fund should be more than sufficient to pay the stipends above mentioned, the President and Fellows may, at their discretion, add such excess of income to the principal, or increase the amount of the stipends, or create additional scholarships for Iowa students. I hope that if the stipends of the undergraduate scholarships are increased, the maximum stipend will be given to the Burlington Scholarship. . . .

"In making the foregoing statements of my wishes and intentions, I desire to impose as absolute requirements,

"First — The name of the scholarships.

"Second — The limiting of the recipients to Iowa boys.

"Third — The maintenance of at least one scholarship available only to bona fide residents of Des Moines County graduating from the Burlington High School, or the public school which takes its place.

"I hope that the President and Fellows will be governed in other particulars by my expressed wishes, but, realizing that conditions may change in the future, I impose no further trust than is set out in the preceding paragraph, leaving it to the discretion of the President and Fellows to see to it that the scholarships are assigned in such manner from year to year, and from generation to generation, as shall best serve the interest of the State of Iowa."

From a graduate of Princeton University, \$10,000, "to found the Princeton Fellowship at Harvard," without other conditions.

From the estate of Miss Eliza O. Ropes, of Salem, Mass., securities valued at \$56,730, and \$5,550.50 in cash, the amount of dividends on the above securities, with interest on the same, received by the executors "for the support of, or to assist in endowing, a Professorship to be known as the Nathaniel Ropes Chair of Political Economy. If the income from the stock is more than sufficient for the support of the professorship, the Peabody Museum of Archaeology and Ethnology, of which Professor F. W. Putnam is at the present time Curator, to annually receive the surplus."

From Robert W. Sayles, \$5,000, to be added to the Fund which he established, the income of which is to be used for the support of a summer course in structural or stratigraphical geology conducted preferably in the mountain region of western North America.

From the estate of Amey Richmond Sheldon (Mrs. Frederick Sheldon), of Newport, R. I., \$15,250 additional, for the Frederick Sheldon Fund, "the income thereof to be applied in the discretion of and under rules to be prescribed by the President and Fellows aforesaid to the further education of students of promise and standing in the University by providing them with facilities for further education by travel after graduation, or by establishing travelling scholarships."

To establish the Joseph Warren Smith, Jr., Memorial Fund, the income of which is to be used for the general purposes of the Dental School without further restriction, from

The family of Joseph Warren Smith, Jr.	\$10,000
Walter A. Davis	100
Samuel T. Elliott,	100
Paul H. Shinn	25
	<hr/>
	\$10,225

For the Teachers' Endowment Fund, \$13,390.53 additional, from previous contributors.

In memory of Julian Palmer Welsh, of the Class of 1897, of Philadelphia, Pa., \$1,288.90 and a bond for \$1,000, par value, to establish a memorial fund which is to accumulate until it amounts to \$3,000. "The income of the fund is then to be spent in buying for the Harvard College Library books in English and American literature, two subjects in which Mr. Welsh was much interested. The income of this fund is, however, to be charged on demand with the expense (not to exceed \$100) of designing and engraving a book-plate."

From the estate of Jerome Wheelock, of Worcester, Mass., \$10, the seventh payment of that amount for establishing the Jerome Wheelock Fund of \$100,000.

From the estate of Augustus Woodbury, D.D. 1849, of Concord, N. H. :—

\$1,000, to be used for the benefit of the Divinity School, "in such manner and for such purposes as the Faculty of said 'Divinity School' shall see fit."

\$2,000, to establish "the 'Augustus Woodbury Scholarship', the income of which shall be given to such students in said College as the President and Fellows may select, the primary condition being that such student shall have been prepared for college at Phillips Exeter Academy in Exeter, New Hampshire."

Three other scholarships were provided for by Dr. Woodbury's will, one in Brown University and two in Dartmouth College. "And I request the corporation of the Colleges above mentioned . . . to allow the funds for scholarships in their respective institutions to accumulate before the income is paid as directed: to wit . . . that in Harvard College to accumulate for four years from the date of receipt, to the end that one scholarship in one or other of said colleges shall be assigned annually and with the hope that such scholarship will be considered a worthy object of attainment by some member of the graduating class of Phillips Exeter Academy, and thus become an incentive to diligence in study."

From Frederick Cheever Shattuck, \$4,000 in cash, and securities valued at \$13,000, the first payment on account of

his offer of \$25,000, to establish "The Henry P. Walcott Fellowship in Clinical Medicine."

"The income of this Fund is to provide for the support of a Fellow in Clinical Medicine, who shall receive his appointment from the Corporation on nomination by the Jackson Professor of Clinical Medicine; who, while the holder of the Fellowship, shall not engage in private practice, but devote his time to teaching and clinical research work."

From eight anonymous givers, \$532 additional, to be added to the Harvard Dental Alumni Endowment Fund.

From the estate of Henry S. Nourse, \$6,062.47, on account of the principal of Mr. Nourse's residuary bequest.

From the proceeds of the sale of the old Medical School building, \$40,000.00, the balance of which, after the extinction of advances to the Medical School, is, by vote of the President and Fellows, to be added to the Henry L. Pierce (Residuary) Fund in the Medical School.

The total amount of these gifts for capital account is \$581,450.14, as shown in Exhibit A.

GIFTS FOR IMMEDIATE USE

June 30, 1910

From Edwin H. Abbot, \$200, in accordance with the terms of his letter of gift, to be added to the Teachers' Endowment Fund.

From D. Webster Abercrombie, \$50 additional, to be credited to Scholarship and Beneficiary Money Returned. "Though my own indebtedness to the Loan Fund while an undergraduate at Harvard was discharged many years ago, I still have great appreciation of the help it was to me, . . ."

From the Aesculapian Club, \$150, "to be awarded during the academic year 1910-11 as a scholarship to a deserving white student in the first year class of the Harvard Medical School, said scholarship to bear the name of the Aesculapian Club Scholarship."

From John S. Ames, \$846.36, for the Division of Forestry, for repairs on the "Marsh House" belonging to the Harvard Forest in Petersham and for certain other expenses.

From Mrs. G. Howland Shaw, \$100, for anatomical research.

From an anonymous giver, \$428, to pay for a series of lectures on Tropical Agriculture, given in the autumn of 1909 in Cambridge by Dr. John C. Willis, Director of the Royal Botanic Gardens in Ceylon.

From an anonymous giver, \$4,253.98, towards the support of the Clinic at the Harvard Medical School.

From an anonymous giver, \$350, for the Ricardo Prize Scholarship for 1910-11.

From an anonymous giver, \$200, towards meeting the expenses of a clinical study of cancer under the direction of the Cancer Commission of Harvard University.

From an anonymous giver, \$250, for the salary of a secretary for the Cancer Commission of Harvard University.

From an anonymous giver, \$500, for the payment of an additional salary in the Medical School.

From an anonymous giver, \$50 additional, towards the return of aid he received while a student in Harvard College, to be used during the year to aid a certain undergraduate.

From an anonymous giver, \$50, to be used as the income of Scholarship Funds is used.

From an anonymous giver, \$2,500 additional, "for immediate use by the Department of Social Ethics."

From an anonymous giver, \$1,000, "to be applied to Fellowships in the Department of Social Ethics."

For an addition to the building at the Arnold Arboretum, from

Ernest B. Dane	\$1,000
Mrs. Robert D. Evans	5,000
Walter Hunnewell	5,000
Charles S. Sargent	5,000
Mrs. Francis W. Sargent	5,000
Mrs. Robert G. Shaw	5,000
Bayard Thayer	5,000
Mrs. Bayard Thayer	5,000
Frank G. Webster	5,000
	<u>\$41,000</u>

To increase the income of the Arnold Arboretum for the year 1909-10, from

Mrs. George R. Agassiz	\$1,000	Amount brought forward . . .	\$2,310
Thomas Allen	100	E. Pierson Beebe	100
Frederick L. Ames	100	George Nixon Black	100
John S. Ames	100	Mrs. Arthur W. Blake	100
Miss Mary S. Ames	100	Francis Blake	100
Oliver Ames	100	Peter B. Bradley	100
Larz Anderson	100	Mrs. Edward D. Brandegee . . .	100
Mrs. Larz Anderson	100	Mrs. John L. Bremer	100
Anonymous	100	Miss Helen O. Brice	100
Anonymous	100	Peter C. Brooks	100
Francis R. Appleton	100	Shepherd Brooks	100
John Jacob Astor	100	E. S. C.	100
Miss Ellen B. Bacon	100	Mrs. Louis Cabot	100
Walter C. Baylies	100	Mr. and Mrs. Henry B. Chapin .	300
Boylston A. Beal	10	Alexander Cochrane	100
Amount carried forward . . .	<u>\$2,310</u>	Amount carried forward . . .	<u>\$3,910</u>

FOR THE ARNOLD ARBORETUM (*continued*)

Amount brought forward . . .	\$3,910	Amount brought forward . . .	\$9,260
Mr. and Mrs. James M. Codman . . .	100	Eben D. Jordan	100
Miss Alice S. Coffin	100	George G. Kennedy	100
Charles A. Coffin	100	Nathaniel T. Kidder	100
Robert J. Collier	100	Mrs. David P. Kimball	100
Mrs. J. Randolph Coolidge	100	Horatio A. Lamb	100
T. Jefferson Coolidge	100	Gardiner M. Lane	100
F. G. Crane	100	John M. Longyear	100
W. Murray Crane	100	Mrs. John M. Longyear	100
Zenas Crane	100	Arthur T. Lyman	100
Mrs. Charles P. Curtis	100	Mrs. Theodore Lyman	100
Mrs. Charles H. Dalton	100	Clarence H. Mackay	100
Ernest B. Dane	100	Mrs. Edith Carpenter Macy	100
Mrs. Ernest B. Dane	100	Thomas L. Manson	100
Mrs. Arthur E. Davis	100	Mrs. Charles E. Mason	100
George Dexter	100	Miss Ellen F. Mason	100
Philip Dexter	100	Miss Fanny P. Mason	100
George B. Dorr	100	George von L. Meyer	100
Mr. and Mrs. Eben S. Draper	100	George H. Mifflin	100
Mrs. George A. Draper	100	Thomas Minns	100
Carroll Dunham	25	J. P. Morgan	100
Miss Hannah M. Edwards	100	Mrs. J. P. Morgan, Jr.	100
Mrs. George R. Emerton	100	John T. Morris	100
William Endicott, Jr.	100	Mrs. John T. Morse	100
Arthur F. Estabrook	100	Frederick S. Moseley	100
"F"	100	Robert Osgood	100
Charles S. Fairchild	100	John Parkinson	100
L. Carteret Fenno	100	Frank E. Peabody	100
Sewell H. Fessenden	100	George A. Peabody	100
Miss Cornelia A. French	100	Charles L. Peirson	100
Mr. and Mrs. Henry C. Frick	1,000	John C. Phillips	100
Friend	100	Mrs. John C. Phillips	100
A. P. Gardner	25	Dudley L. Pickman	100
William A. Gaston	100	Mrs. Dudley L. Pickman	100
J. E. Gay	100	Wallace L. Pierce	100
R. H. I. Goddard	100	David Pingree	100
Mrs. Henry S. Grew	100	Laban Pratt	100
E. A. Hamill	100	Thomas E. Proctor	100
Charles Hayden	100	William A. Read	100
Augustus Hemenway	100	Mrs. Jacob C. Rogers	100
Mrs. Augustus Hemenway	100	Elihu Root	100
Henry Hornblower	100	Mrs. Robert S. Russell	100
Henry S. Howe	100	Thomas F. Ryan	100
Henry S. Hunnewell	100	Richard M. Saltonstall	100
Mrs. Henry S. Hunnewell	100	Charles S. Sargent	100
Walter Hunnewell	100	Mrs. Charles S. Sargent	100
Mrs. Oscar Iasigi	100	Winthrop Sargent	100
Amount carried forward . . .	\$9,260	Amount carried forward . . .	\$13,860

FOR THE ARNOLD ARBORETUM (*continued*)

Amount brought forward . . .	\$13,860	Amount brought forward . . .	\$16,260
Mrs. Winthrop Sargent	100	Mrs. Nathaniel Thayer	100
Frank A. Schirmer	100	Miss Susan Thayer	100
Henry F. Sears	100	Miss S. B. Thayer	100
Mrs. J. Montgomery Sears . . .	100	Samuel Thorn	50
Mrs. Knyvet W. Sears	100	Two anonymous givers in New	
Mrs. G. Howland Shaw	100	York	600
Quincy A. Shaw	50	Charles H. Tyler	50
Mrs. Robert G. Shaw	100	William Austin Wadsworth . .	100
C. R. Simpkins	100	Charles C. Walker	100
Charles A. Stone	100	Edwin S. Webster	100
Mrs. Charles A. Stone	100	Mrs. Edwin S. Webster . . .	100
Galen L. Stone	100	Frank G. Webster	100
Nathaniel H. Stone	100	Mrs. Frank G. Webster . . .	100
Charles E. Stratton	100	Laurence J. Webster	100
Miss Alice P. Tapley	25	Mrs. Laurence J. Webster . .	100
Mrs. A. P. Tapley	25	Charles G. Weld	100
Bayard Thayer	100	C. Minot Weld	100
Mrs. Bayard Thayer	100	Stephen M. Weld	100
Duncan F. Thayer	100	Mrs. Stephen M. Weld	100
Miss Evelyn Thayer	100	Mrs. Henry C. Weston	100
E. V. R. Thayer	100	William P. Wharton	50
Mrs. E. V. R. Thayer	100	George R. White	100
John E. Thayer	100	William Whitman	100
Mrs. John E. Thayer	100	John D. Williams	100
John E. Thayer, Jr.	100	Robert Winsor	100
Nathaniel Thayer	100	William M. Wood	100
Amount carried forward . . .	\$16,260		\$19,110

Towards meeting the cost of fitting up the new office of the Graduate School of Arts and Sciences, from

Charles H. Haskins	\$145.50
George L. Kittredge	20.00
	<u>\$165.50</u>

From the Trustees of the Bache Fund, \$500, towards the salary of an additional machinist to assist in research at the Jefferson Physical Laboratory.

For a course of lectures delivered in Cambridge in the autumn of 1909, on "La Chanson de Roland," by Professor Joseph Bédier of the Collège de France, from

Gordon Abbott	\$20	Amount brought forward . . .	\$115
J. T. Coolidge, Jr.	25	W. H. Schofield	25
J. D. M. Ford	25	G. B. Shattuck	25
G. L. Kittredge	25	E. S. Sheldon	25
F. N. Robinson	20	C. H. C. Wright	10
Amount carried forward . . .	\$115		<u>\$200</u>

From Charles Sumner Bird, \$200, for the Charles Sumner Bird Scholarship for 1910-11, "to be awarded on the same conditions as those attached to the scholarships given by the Harvard Club of Boston."

From an anonymous giver, \$150, towards the salary of an Assistant in the Department of Botany.

For present use at the Botanic Garden, from

Mrs. Oliver Ames	\$5,000.00
A. F. Estabrook	1,000.00
Walter Hunnewell	1,000.00
S. M. Weld	1,000.00
	<hr/>
	\$8,000.00

For present use at the Botanical Museum, from

Anonymous	\$1,500.00
Anonymous	69.10
	<hr/>
	\$1,569.10

From W. Graham Bowdoin, Jr., \$250, establishing the "W. Graham Bowdoin, Jr., Scholarship," "to be awarded each year to a deserving student from the State of Maryland, who may be registered in any department of the University. In the event of there being no student at the University from the State of Maryland eligible for it, this scholarship may be awarded to any deserving undergraduate student . . . to continue for an indefinite period, and appointment thereto is to be made by the Committee on Scholarships, subject to my approval."

From Mrs. John L. Bremer, \$250, to be expended by the Department of Comparative Anatomy for scientific drawings.

From Miss Katherine E. Bullard, \$500 additional, "for the benefit and use of the Department of Neuropathology."

Towards meeting the second year's expenses of the Graduate School of Business Administration, in accordance

with the pledges which made the undertaking possible, from

Oliver Ames	\$500	Amount brought forward . .	\$18,175
George F. Baker, Jr.	100	Robert Walton Goelet	250
Walter C. Baylies	500	Henry S. Howe	100
Charles S. Bird	250	A. Lawrence Lowell	1,000
J. A. Lowell Blake	500	George S. Mandell	750
Edward D. Brandegee	100	J. Pierpont Morgan, Jr.	1,000
Allston Burr	100	Nathaniel C. Nash	100
Benjamin P. Cheney	1,000	Bradley W. Palmer	100
Charles A. Coffin	200	George L. Peabody	200
"E"	1,000	James H. Proctor	100
Estate of Robert D. Evans . .	1,000	Estate of William B. Rice . .	500
Charles S. Fairchild	500	Horace S. Sears	200
William A. Gaston	100	Herbert N. Straus }	500
General Education Board . .	11,975	Jesse I. Straus }	
Joseph T. Gilbert	100	Percy S. Straus }	
Robert Goelet	250	Members of the Class of 1879 .	1,300
Amount carried forward . .	\$18,175		\$24,275

For the general purposes of the Graduate School of Business Administration, from

Ignacio Calderón	\$50
Edward A. Filene	100
Robert F. Herrick	100
Adrian H. Joline	100
James Logan	50
George D. Markham	50
W. G. McAdoo	50
Frederick W. Taylor	150
	<u>\$650</u>

For loans in the Graduate School of Business Administration, from

Charles C. Bolton	\$200
Edgar C. Felton	100
J. Pierpont Morgan, Jr.	500
George W. Perkins	50
	<u>\$850</u>

From Carroll Dunham, \$100 additional, for present use at the Bussey Institution.

From the Carnegie Foundation for the Advancement of Teaching, \$28,675.18, to pay retiring allowances granted by the Executive Committee of this Foundation to persons connected with Harvard University.

From Arthur T. Cabot, \$50, for experiments to be made by Dr. Barney in the Medical School.

For improvements in the lecture room used by the Department of the Classics in Harvard Hall, from

E. D. Brandegee	\$200
Henry B. Chapin	125
Prentiss Cummings	200
W. Amory Gardner	200
Babson S. Ladd	200
William K. Richardson	125
Lawrence E. Sexton	200
	<u>\$1,250</u>

To be added to the income available for the payment of salaries in the College, from

A. Lawrence Lowell	\$500
George Wigglesworth	1,000
	<u>\$1,500</u>

From Archibald Cary Coolidge, \$20, the proceeds from the sale of copies of the Hohenzollern book-plate.

From Archibald Cary Coolidge, \$650, towards providing additional service at the College Library.

From "A Friend of the Dental School," \$50, for the purchase of surgical instruments.

Towards the expenses of dedicating the new building at the Dental School, from

Mrs. James H. Beal	\$50
Samuel Carr	50
Hazen Clement	20
Charles E. Cotting	50
Mrs. Sumner Hollingsworth	25
Mrs. Eliot Hubbard	5
Gardiner M. Lane	50
Mrs. Thornton K. Lothrop	50
Mrs. Clarence Moore	50
John T. Morse, Jr.	50
Mrs. Guy Norman	20
Francis G. Peabody	10
Charles G. Saunders	10
Mrs. Frederick R. Sears	50
Mrs. Arthur R. Sharp	25
Miss Ellen M. Tower	50
Mrs. William B. Walker	25
Robert Winsor	50
	<u>\$640</u>

For the purchase of land, the erection of buildings, or the endowment of education and research, for the benefit of the Dental School, from

Charles A. Brackett	\$3,000
Ernest H. Caswell	25
Roland E. Desoe	10
Martin B. Dill	100
Nathaniel A. Finkelstein	50
J. Austin Furfey	500
George F. Grant	100
Charles A. Jameson	10
Blaine W. Morgan	10
Charles S. Parker	25
William H. Potter	1,000
M. C. Smith	125
Harry S. Parsons	300
	<u>\$5,255</u>

From George H. Wright, \$25, to forward original research in the Dental School.

From Mrs. Henry Draper, \$4,400 additional, to be spent by the Director of the Observatory in prosecuting the researches in the photography of stellar spectra with which the late Dr. Henry Draper's name is honorably associated.

For the equipping of a special room in Emerson Hall for the study of the vision of animals, from

Anonymous	\$50
Richard H. Dana	30
Samuel D. Warren	30
W. R. Warren	30
George Wigglesworth	30
	<u>\$170</u>

From the Department of English, \$100, for a lecture delivered in Cambridge, in December, 1909, on "Logic and Grammar," by Professor Otto Jespersen of Copenhagen.

For expenses of the exhibition of certain works of the Boston Art Museum at the William Hayes Fogg Art Museum during the summer of 1909, from

Edward W. Forbes	\$32.30
K. G. T. Webster	25.00
	<u>\$57.30</u>

For the purchase of two paintings, one representing St. Luke painting a picture of the Madonna, by a master of the Flemish school, and "The Holy Family," by Pinturicchio, for the William Hayes Fogg Art Museum, from

Mrs. E. M. Cary	\$3,500
Edward W. Forbes	800
	<hr/>
	\$4,300

For loans to Freshmen, from

"A Friend"	\$5,000
Anonymous	500
W. R. Castle, Jr.	25
H. B. French	196
William H. Gove	1,000
George W. Kemp	500
Franklin W. Moulton	25
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	\$7,246

For the construction of an exhibition case for photographs in the geological section of the University Museum, under the direction of the Department of Geology and Geography, from

Mrs. W. Scott Fitz	\$100
Mrs. Henry S. Grew	100
Mrs. Edward Wigglesworth	100
	<hr/>
	\$300

From Adolphus Busch, \$100,000, to be used for the erection of a building for the Germanic Museum.

Towards a new chemical laboratory, in memory of Wolcott Gibbs, LL.D., Rumford Professor and Lecturer on the Application of Science to the Useful Arts from 1863 to 1887, at this University, from

F. Lothrop Ames	\$1,000	Amount brought forward . .	\$20,200
John S. Ames	500	T. Jefferson Coolidge	1,000
Six anonymous givers	7,800	Charles E. Cotting	500
Anonymous	250	James M. Crafts	500
Anonymous	100	Warren Delano	500
Francis Bartlett	2,000	Lucien Eaton	20
Thomas Prince Beal	100	William Endicott, Jr.	500
Mrs. A. F. Cary	3,000	Frederick P. Fish	200
Daniel K. Catlin	100	Mrs. W. Scott Fitz	2,000
Theron E. Catlin	100	Charles H. W. Foster	500
Alexander Cochrane	5,000	"Two Friends, L. H. F. and	
Mrs. J. P. Cooke	250	A. H. F."	250
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Amount carried forward . .	\$20,200	Amount carried forward . .	\$26,170

FOR THE WOLCOTT GIBBS MEMORIAL FUND (*continued*)

Amount brought forward . .	\$26,170	Amount brought forward . .	\$83,470
William A. Gaston	250	George B. Pierce	10
Edwin Farnham Greene	100	David Pingree	1,000
Miss Katharine Horsford . . .	250	Franklin Remington	25
Charles Jackson	500	John L. Saltonstall	500
Thomas W. Lawson	500	Mrs. Frederick C. Shattuck . .	250
James Loeb }	50,000	Quincy A. Shaw	1,000
Morris Loeb }		A. Shuman	250
Miss Katharine P. Loring . . .	50	Ralph Simpkins	50
Arthur Lyman	100	Benjamin B. Thayer	25
Arthur T. Lyman	1,000	Elihu Thomson	1,000
Frank Lyman	500	Alfred Tuckerman	100
Harry Lyman }	1,000	Bayard Tuckerman	100
Theodore Lyman }		Miss Emily Tuckerman	1,000
Edward Mallinckrodt, Jr. . . .	1,100	Theodore N. Vail	1,000
George S. Mandell	50	Eliot Wadsworth	500
George D. Markham	100	Grant Walker	1,000
Arthur H. Marks	500	George Wigglesworth	1,000
Mrs. Bennett H. Nash	250	Moses Williams	100
Charles J. Paine	1,000	William P. Wolcott	25
Albert T. Perkins	50		
Amount carried forward . .	\$83,470		\$92,405

For the Gray Herbarium, from

Rodolphe L. Agassiz	\$10	Amount brought forward . . .	\$290
Thomas Allen	10	George G. Crocker	10
Miss Mary S. Ames	10	Mrs. Charles A. Cummings . .	5
Anonymous	25	Mrs. Charles P. Curtis	10
Anonymous	25	Henry P. Curtis	10
Walter C. Baylies	10	Samuel B. Dana	10
Thomas P. Beal	10	Frank A. Day	25
A. C. Bent	10	George Dexter	10
Mrs. Arthur W. Blake	10	William Endicott	10
Mrs. John L. Bremer	10	Charles F. Fairbanks	10
Miss Sarah F. Bremer	10	William Farnsworth	10
Edward M. Brewer	10	Dudley B. Fay	10
William Brewster	10	Mrs. Joseph N. Fiske	10
Addison Brown	10	S. W. Fletcher	10
Mrs. William S. Bullard	10	Mrs. William H. Forbes	5
"E. S. C."	50	Francis A. Foster	10
Mrs. James B. Case	10	Francis C. Foster	20
Horace D. Chapin	10	Mrs. Francis C. Foster	15
Charles F. Choate	10	Miss Harriet E. Freeman	10
Miss Cora H. Clarke	10	Miss Cornelia A. French	10
Miss Louise H. Coburn	10	George A. Goddard	10
Miss Helen Collamore	10	Miss Harriet Gray	10
Amount carried forward . .	\$290	Amount carried forward . . .	\$520

FOR THE GRAY HERBARIUM (*continued*)

Amount brought forward . . .	\$520	Amount brought forward . . .	\$972
Mrs. Henry S. Grew	10	Miss Mary R. Peabody	10
Mrs. Augustus Hemenway	10	Charles L. Peirson	25
Miss Clara Hemenway	10	Mrs. Anna T. Phillips	10
Joseph P. B. Henshaw	10	Mrs. Dudley L. Pickman	10
Miss Rose Hollingsworth	10	David Pingree	20
Henry Hornblower	10	Miss Elizabeth C. Putnam	5
Miss Katharine Horsford	25	Mr. and Mrs. George Putnam	20
Clement S. Houghton	10	Miss Sarah E. Read	15
Henry S. Howe	10	Mrs. William Howell Reed	10
Mrs. John E. Hudson	2	George E. Richards	10
Mrs. Arthur Hunnewell	10	William L. Richardson	25
Henry S. Hunnewell	25	Denman W. Ross	10
Walter Hunnewell	10	Mrs. M. Denman Ross	10
Bernard Jenney	10	Mrs. Waldo O. Ross	10
Edward C. Johnson	10	James E. Rothwell	10
Frank Lowell Kennedy	5	Mrs. Robert S. Russell	10
Charles A. Kidder	10	Mrs. Philip H. Sears	10
David P. Kimball	10	Mrs. G. Howland Shaw	10
Mrs. David P. Kimball	10	David N. Skillings	10
The Misses Kimball	10	Francis Skinner	10
Mrs. Harriet M. Laughlin	10	Francis P. Sprague	10
Erasmus D. Leavitt	10	Nathaniel H. Stone	10
George V. Leverett	25	Mrs. Joshua A. Swan	5
Miss Mary F. Linder	10	Nathaniel Thayer	100
Augustus P. Loring	10	Benjamin Vaughn	10
Miss Katharine P. Loring	10	Charles C. Walker	10
Miss Louisa P. Loring	10	Miss Cornelia Warren	10
William C. Loring	10	Benjamin M. Watson	10
Mrs. Thornton K. Lothrop	10	Frank G. Webster	20
Mrs. George G. Lowell	10	Mrs. Frank G. Webster	20
Arthur T. Lyman	10	Stephen M. Weld	25
Miss Ellen F. Mason	10	Mrs. Charles T. White	10
Mrs. Gilbert N. McMillan	10	George Wigglesworth	10
Miss Susan Minns	50	Miss Adelia C. Williams	25
Mrs. Samuel Torrey Morse	10	John D. Williams	20
Nathaniel C. Nash	10	Moses Williams	10
Grenville H. Norcross	10	Miss Mary Woodman	10
Mrs. Otis Norcross, Jr.	10		
			\$1,537
Amount carried forward . . .	\$972		

From the Committee on the Regulation of Athletic Sports, \$4,158.56, to be added to its previous gifts for improvements upon, and additions to, The Soldier's Field, to be made by said Committee, with the approval of the Corporation.

From the Harvard Club of Boston, \$1,000, establishing five scholarships of \$200 each, to be awarded annually beginning with 1910-11, "to properly qualified graduates of public High and Latin Schools (including the Roxbury Latin School), within a radius of twenty miles from the State House in Boston, during their first year in Harvard College as candidates for the degree of A.B. or S.B.

"In awarding the scholarships, the committee will take into consideration the scholarly attainments of the applicants as shown by their school records, and also their character, qualities of leadership, and well-rounded development . . ."

From the Harvard Club of Buffalo, \$200, for the scholarship of the Club for 1909-10.

From the Harvard Club of Chicago, \$480, for the scholarship of the Club for 1908-09 and 1909-10.

From the Harvard Club of Cleveland, \$400, for the scholarship of the Club for 1909-10.

From the Harvard Club of Fitchburg, \$158.50, for the scholarship of the Club for 1909-10.

From the Harvard Club of Hawaii, \$150, for the scholarship of the Club for 1909-10, "the award to be made with the understanding that it is a loan, repayable after a term of years."

From the Harvard Club of Indiana, \$200, for the scholarship of the Club for 1909-10.

From the Harvard Club of Lowell, \$300, for two scholarships of \$150 each, for the year 1909-10, the beneficiaries to be nominated by a committee of the Club.

From the Harvard Club of Lynn, \$33.33, the final payment for 1909-10, on account of the Club's offer of \$100 annually to be awarded to a student from Lynn, Swampscott, Saugus, or Nahant deemed by the Executive Committee worthy of such aid.

From the Harvard Club of New Jersey, \$250, the second of three annual prizes of this amount to be awarded to that student from New Jersey who enters the Freshman Class in Harvard College with the highest credit in his examinations for admission.

From the Harvard Club of Philadelphia, \$200, for a special scholarship of the Club for 1909-10.

From the Harvard Club of San Francisco, \$450, for the scholarship of the Club for 1909-10.

From the Treasurer of the Harvard Club of San Francisco, \$50 additional, for the scholarship of the Club for 1908-09.

From the Harvard Club of Seattle, \$300, for the scholarship of the Club for 1909-10.

From the Harvard Club of Washington, D.C., \$117 additional, towards the maintenance of the scholarship of the Club for three years, beginning with 1909-10.

From the Harvard Club of Worcester, Mass., \$100, the final payment for 1909-10 (the balance having been paid previously to the student), on account of the generous offer of the Club to maintain a scholarship of \$200 annually for at least three years, beginning with the present year, the holder to be a resident of Worcester County and preferably of Worcester.

From the Harvard Medical Alumni Association, \$1,500 additional, to be used to increase the salaries of some of the younger Instructors and Assistants in the Medical School.

From the Harvard Menorah Society, \$100, for a prize in 1908-09, the second gift of this amount, which through the generosity of Jacob H. Schiff the Society is able to offer to the University annually until further notice, for a prize to be known as the "Harvard Menorah Society Prize," for an essay by an undergraduate on a subject connected with the work and achievements of the Jewish people.

From anonymous friends of the University, \$200, the first of three annual scholarships, beginning with 1909-10, to establish the Huidekoper Scholarship in memory of Edgar Huidekoper and Frances Shippen Huidekoper of Meadville, Pa., "to be enjoyed by a properly qualified graduate of Allegheny College, Meadville, Pennsylvania, who may desire to pursue his studies in one of the graduate departments of the University. The incumbent of the scholarship is to be chosen in the usual manner

after conference with the proper authorities at Allegheny College. This scholarship may be held in two or three successive years by the same student if there be no other candidates."

From James H. Hyde, \$600, for the Fellowship of the Cercle Français de l'Université Harvard for 1909-10.

Towards the expenses of the International Commission on the Teaching of Mathematics, from

Ginn and Company	\$100
George Wentworth	100
	<hr/> \$200

From Nathaniel T. Kidder, \$11,000, for the new wing added in 1909 to the building occupied by the Gray Herbarium.

From Gardiner M. Lane, \$1,000, to be used for classical lectures or such other purpose as the Department of the Classics may decide.

From Joseph Lee, \$2,500, for the salary of an instructor in the Department of Education.

For the purchase of books for the College Library, from

Gordon Abbott, for books on French Literature	\$150.00
Anonymous, for a collection of the works of Alexander Pope formed by Marshall C. Lefferts	4,000.00
Anonymous, for books on Oceanic Linguistics .	25.00
Anonymous, for books on Algiers	15.00
Anonymous	12.93
Anonymous	12.00
John S. Bryan, for books relating to the South .	5.00
Lawrence S. Butler, for books on Paris	50.00
Archibald Cary Coolidge, for books on the history of France, Germany, and other subjects	3,100.00
Archibald Cary Coolidge } for books on South } Clarence L. Hay . . . } America }	1,924.08
Harold J. Coolidge, for books on China	50.00
Dante Society	30.00
Roland B. Dixon, for books on the Oceanic Area	25.00
Students in Economics, for books for that course	15.03
Department of English	9.96
John H. Gardiner, for books on Burmah	20.00
Editors of "The Harvard Crimson," in memory of their president, Fabian Fall, 1910, for extra books needed in large courses	250.00
Amount carried forward	<hr/> \$9,694.00

FOR THE PURCHASE OF BOOKS FOR THE COLLEGE LIBRARY (*continued*)

Amount brought forward	\$9,694.00
George L. Kittredge, for books illustrating the history of Witchcraft	50.00
John S. Lawrence, for books on the lives of suc- cessful men	10.00
James Loeb, for "Labor Periodicals"	100.00
Morris Hicky Morgan, for a German translation of Persius	2.88
Edwin Stanton Mullins, for books on Folk-lore	50.00
Walter W. Naumburg, for books on Shakespere	100.00
William Phillips, for books on London	100.00
Evan Randolph	100.00
James F. Rhodes, for books on Western history	300.00
Mrs. A. Lawrence Rotch, for books relating to the South	30.00
Saturday Club, of Boston, Mass.	500.00
Horace B. Stanton, for the Molière Collection	25.00
Enrique deC. Zanetti, for books on Cuba	150.00
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	\$11,211.88

From Frank L. Crawford, \$16.50, for binding books presented by him to the College Library.

From friends, in memory of Henry Weidemann Locke, S.B. 1902, \$100 additional, for a scholarship for 1909-10 in Electrical Engineering in the Graduate School of Applied Science.

From James Loeb, \$175, "to be used in providing a suitable frame for the ancient portrait of Chaucer bequeathed to the Library by Professor Norton."

From Arthur T. Lyman, \$50 additional, for charts, maps, etc., for the Department of Economics.

From Philippe Belknap Marcou, \$50 additional, for a prize for French composition, to be called the Jeremy Belknap Prize, as a memorial to Dr. Jeremy Belknap of the Class of 1762.

From the Massachusetts Society for Promoting Agriculture, \$2,000 additional, "to be expended at the Arnold Arboretum by the Director, to increase the knowledge of trees."

From the Massachusetts Society for Promoting Agriculture, \$1,200, "to aid the College to enable Professor Theobald Smith to continue his experiments on bovine tuberculosis . . ."

From J. Ewing Mears, \$225, his first annual gift in accordance with the terms of his offer to establish a scholarship with an income of \$225 per year, to be designated "The James Ewing Mears, M.D., Scholarship in Medicine," to be held by the beneficiary "for the full course of four years in the Medical School, subject to the standing he shall maintain in scholarship and to his good conduct as a student."

To be added to the income available for the payment of salaries in the Medical School, from

Henry L. Higginson	\$5,000
Frederick Cheever Shattuck	100
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	\$5,100

From an anonymous giver, \$184.58, the balance remaining after aiding two students from a gift of \$300, the money to be used by the Dean of the Medical School for the assistance of needy students.

From members of the Class of 1879 of the Harvard Medical School, \$366.79, establishing "The Loan Fund of the Medical Class of 1879. The money to be used as a loan fund to aid any student or students in the Medical School in accordance with the request of the Class, or in the absence of such request under the direction of the Faculty of Medicine.

"The Class reserves the privilege of converting this loan fund into a scholarship if at any time in the future the amount of the fund should be sufficient to justify such a change."

For the use of the Division of Music, from

Percy L. Atherton	\$25
W. Kirkpatrick Brice	75
Frederick S. Converse	10
Carroll Dunham	50
William G. Farlow	10
Horace E. Smith	50
Philip L. Spalding	50
Walter R. Spalding	5
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	\$275

From James J. Putnam and Moorfield Storey, Trustees, \$1,000 additional, for the Department of Neuropathology, for researches bearing on the knowledge and treatment of diseases of the nervous system.

From the Patria Society of Harvard University, \$50, to be awarded by the Corporation of Harvard College to the winner of a prize essay contest, open only to undergraduates, upon the subject, "Harvard Men in the Revolution."

From John B. Stetson, Jr., \$150 additional, for books and periodicals for the library of the Peabody Museum of American Archaeology and Ethnology.

For the Peabody Museum of American Archaeology and Ethnology, from

A friend	\$100
Mrs. N. E. Baylies	25
Clarence B. Moore	500
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	\$625

From Henry W. Haynes, \$55, his second annual gift of this amount, to the Peabody Museum of American Archaeology and Ethnology, for the general purposes of the library, including binding current serials.

From Edward Dyer Peters, \$250, his third gift of like amount, for a scholarship in Mining and Metallurgy in the Graduate School of Applied Science for the year 1910-11.

From John C. Phillips, \$3,000 additional, to be used under the direction of the Shattuck Professor of Pathological Anatomy, the Associate Professor of Pathological Anatomy, and the donor, for work in the Department of Pathology.

From Theodore Lyman, \$150, for the salary of an Assistant in Physics for 1909-10.

From Edward C. Pickering, \$3,000 additional, for immediate use at the Observatory.

From Murray Anthony Potter, \$225, in memory of his mother, for two prizes in Comparative Literature, to be called the "Susan Anthony Potter Prizes," and for a prize in Spanish Literature of the Golden Age.

From Robert W. Sayles, \$350, towards the salary and expenses of an Assistant in the Summer School in Geology in Montana.

From Lincoln Frederick Schaub, \$380.18, the amount received by him in scholarships while in the Law School, plus interest at six per cent., to be used for aid to students in the same manner as Scholarship Money Returned in the Law School is used.

From Jacob H. Schiff, \$10,000 additional, for a scientific expedition to and excavations in Palestine, "upon the condition that, as far as the present expedition is concerned, its labors are to be completed with the end of next summer's work, and that proper provisions be made out of the funds in hand to publish results."

From Jacob H. Schiff, \$5,000, for immediate use at the Semitic Museum.

From Mrs. Joshua Montgomery Sears, in memory of her son, Joshua Montgomery Sears, Jr., \$1,500, to be distributed in not exceeding four prizes, to students in one or more or all of the classes in the Harvard Law School, "who shall have done the most brilliant work in their class during the year, . . . and in making the distribution no regard shall be paid to the pecuniary means of the students who are to receive the same."

From Mrs. Joshua Montgomery Sears, \$5,000, "for acquisitions to the Library of the Arboretum."

From Henry L. Shattuck, \$50 additional, toward the general expenses of undergraduate instruction in Harvard College.

From Francis Skinner, \$1,500 additional, for the purchase of books for the Arnold Arboretum in memory of his father, Francis Skinner, of the Class of 1862.

From Mr. and Mrs. Frederick Nichols, \$500, for the School for Social Workers.

From Jeremiah Smith, \$1,000 additional, to be used for aid to students in the same manner as Scholarship Money Returned in the Law School is used.

From Julian L. Coolidge, \$100, for the South End House Fellowship for 1909-10.

To forward original work in the Laboratory of Surgical Research, from

John S. Ames	\$1,000
Ernest B. Dane	1,500
Mrs. J. Collins Warren	100
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	\$2,600

From John E. Thayer, \$500 additional, for the Bermuda Biological Station for Research.

From Frank Graham Thomson, \$5,000, for additional instruction in Municipal Government.

From Miss Mary L. Ware, \$360 additional, toward the salary of an assistant at the library of the Peabody Museum of American Archaeology and Ethnology.

From Frederick Adams Woods, \$400, for a "Fellowship for the Study of Heredity in American History," for 1909-10.

From Morrill Wyman, \$400, for the purchase of a special piece of apparatus for the use of the Pathological Laboratory.

From Thomas Barbour, \$12, for the purchase of books for the Museum of Comparative Zoölogy.

For present use at the Museum of Comparative Zoölogy, from

Gorham Brooks	\$25
Louis Cabot	100
Theodore Lyman	50
John C. Phillips	25
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	\$200

The total amount of these gifts for immediate use is \$447,287.74, as shown in Exhibit B.

SCHEDULE 1

SPECIAL INVESTMENTS

June 30, 1910

	UNIVERSITY	Principal.	Net Income.
John W. Carter,			
University Houses and Lands,		\$12,500.00	\$317.53
George B. Dorr,			
University Houses and Lands,		115,966.56	2,945.84
George Draper,			
University Houses and Lands,		48,458.50	1,230.97
Robert H. Eddy,			
University Houses and Lands,		56,787.00	1,442.54
John Davis Williams French,			
University Houses and Lands,		5,322.09	135.19
John C. Gray,			
University Houses and Lands,		25,000.00	635.06
Walter Hastings,			
Real Estate, Sacramento St., Cambridge,		20,000.00	1,190.86
Henry L. Higginson,			
University Houses and Lands,		48,435.45	1,230.38
Insurance and Guaranty,			
Real Estate, Lucas St., Boston,		4,000.00	.....
Joseph Lee,			
University Houses and Lands,		10,000.00	254.03
Henry S. Nourse (part),			
40 shares Missouri Zinc Fields Co.,		120.00	.....
Real Estate, Chicago (sold during year),	894.52
Francis E. Parker,			
University Houses and Lands,		113,817.44	2,891.24
Henry L. Pierce (Residuary) (part),			
Equipment at Memorial Hall		157,098.14	6,492.67
Riverside,			
11 shares Harvard Riverside Associates,		11,000.00	.....
Henry Villard,			
University Houses and Lands,		50,000.00	1,270.13
William F. Weld,			
University Houses and Lands,		100,000.00	2,540.25
Amounts carried forward,		\$778,505.18	\$23,471.21

	Principal.	Net Income.
Amounts brought forward,	\$778,505.18	\$23,471.21

COLLEGE

Daniel A. Buckley (part),

Real Estate in Cambridge, Mass.,	70,223.31	6,698.73
“ “ Deer Isle, Me.,	1.00	.....

George Newhall Clark,

100 shares St. Joseph R'y, Light, Heat & Power Co.,	10,000.00	375.00
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Edward W. Codman (part),

\$5,000 Kansas City, Fort Scott & Memphis R. R.		
Cons. M. 6's of 1928,	6,250.00	300.00
5,000 Northern Pacific-Great Northern Joint 4's		
(C. B. & Q. collateral) of 1921,	4,816.25	150.00
2 shares Pacific Mills,	4,600.00	320.00
15 “ Barristers Hall Trust,	1,085.00	33.75
11 “ Boston Real Estate Trust,	13,219.50	495.00
25 “ Central Building Trust,	2,375.00	100.00

Edward Erwin Coolidge,

200 shares U. S. Smelting, Ref. & Mining Co. pref'd,	9,000.00	525.00
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T. Jefferson Coolidge, for Research in Physics,

625 shares Massachusetts Electric Cos., cum. pref'd,	57,500.00	1,093.75
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Eliot Professorship (Jonathan Phillips's Gift),

\$10,000 City of Boston 3½'s of 1920,	10,000.00	175.00
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Professorship of Hygiene (part),

Policy of Mass. Hospital Life Insurance Co., . .	5,000.00	206.25
\$16,000 Northern Pacific-Great Northern Joint 4's		
(C. B. & Q. collateral) of 1921,	15,681.85	480.00
6,000 New York Central & Hudson River R.R.		
(L. S. & M. S. Coll.) 3½'s of 1998,	4,800.00	210.00
35 shares American Smelting & Refining Co., . .	3,115.00	183.75
50 “ American Tel. & Tel. Co.,	5,250.00	300.00
25 “ Canadian Pacific,	3,515.00	175.00
40 “ Chicago, Milwaukee & St. Paul,	4,000.00	280.00
Real Estate in Boston (sold in 1908-09), . . . .	.....	26.65

Arthur T. Lyman (part),

Merrimack Manufacturing Co.'s Note (transferred during the year to General Investments),	1,000.00
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Charles Eliot Norton Fellowship,

\$15,000 Northern Pacific-Great Northern Joint 4's		
(C. B. & Q. collateral) of 1921,	14,100.00	350.00
5,000 Louisville & Nashville Unified M. 4's of 1940,	5,000.00	100.00

George Foster Peabody Scholarship,

\$6,000 Mexican Coal & Coke Co. 1st M., S. F. 5's of 1926,	4,800.00	300.00
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Amounts carried forward,	\$1,032,837.09	\$37,349.09
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	Principal.	Net Income.
Amounts brought forward,	\$1,032,837.09	\$37,349.09
Sarah E. Potter Endowment (part),		
100 shares Boston & Albany,	18,500.00	875.00
100 " Massachusetts Electric Cos., cum. pref'd,	4,000.00	175.00
50 " Plymouth Cordage Co.,	10,000.00	450.00
12 " Pureoxia Co.,	60.00	4.20
William Reed Scholarship,		
\$1,000 New York Central & H. R. Gold 3½'s of 1997,	1,000.00	17.50
1,000 Norfolk and Western Divisional 1st lien & gen. M. 4's of 1944,	1,000.00	20.00
2,000 Northern Pacific-Great Northern Joint 4's (C. B. & Q. collateral) of 1921,	2,000.00	40.00
Nelson Robinson Jr. Additional (part),		
1,750 shares Gauley Coal Land Co. preferred,	175,000.00	.....
Eliza O. and Mary P. Ropes (part),		
100 shares Chicago, Milwaukee & St. Paul,	13,087.50	700.00
100 " Northern Pacific,	11,986.50	700.00
200 " Pennsylvania,	11,987.50	600.00
366 " Boston & Maine (sold during the year), . . . . .	.....	1,098.00
Dunlap Smith Scholarship,		
\$5,000 Metropolitan West Side Elevated R. R. Extension M. 4's of 1938,	4,700.00	100.00
Stoughton Scholarship (part),		
Real Estate in Dorchester,	3,094.30	120.30
Teachers' Endowment (part),		
\$5,000 Broadway Realty Co. Purchase Money, 2d M. 5's of 1916,	5,000.00	250.00
50,000 Wisconsin Central, Minneapolis Terminal Purchase Money M. 3½'s of 1950,	50,000.00	875.00
10 shares Harvard Riverside Associates,	10,000.00	.....
Wales Professorship of Sanskrit,		
Real Estate, Cornhill, Boston,	40,000.00	1,250.21
Samuel Ward's Gift (part),		
Ward's (Bumkin) Island, Boston Harbor,	1.00	.....
J. Palmer Welsh Memorial (part),		
\$1,000 Ontario Power Co. 5's of 1943,	1,000.00	
LIBRARY		
William R. Castle,		
\$1,000 Honolulu Gas Co., Limited, 6's of 1925,	1,000.00	30.00
Francis Parkman Memorial (part),		
\$5,000 Louisville & Jeffersonville Bridge 1st M. Gold 4's of 1945,	4,500.00	200.00
Ichabod Tucker (part),		
Policy of Mass. Hospital Life Insurance Co.,	5,000.00	206.25
Amounts carried forward,	\$1,405,753.89	\$45,060.55

	Principal.	Net Income.
Amounts brought forward,	\$1,405,753.89	\$45,060.55

MEDICAL SCHOOL

John C. Cutter Bequest,

6,250 Carthage Water Power Co., 1st M. 5 % Notes,	1.00	.....
5,000 Elmira Water Works, 1st M. 6's of 1913, (sold during the year), . . . . .	.....	148.33
2,000 Congress Hotel Co., 1st. M. 6's of 1933 (sold during the year), . . . . .	.....	19.33
1,000 Western Union Telegraph Co. Conv. 4's of 1936 (sold during the year), . . . . .	.....	17.78
1,000 Maine Steamship Co., 1st M. 6's of 1926 (sold during the year), . . . . .	.....	30.00
3,000 Albany Ry. Consol. M. 5's of 1930 (sold during the year), . . . . .	.....	45.00

Calvin and Lucy Ellis (part),

\$40,000 Northern Pacific-Great Northern Joint 4's (C. B. & Q. collateral) of 1921,	26,585.00	1,200.00
Real Estate in Boston (half interest in),	22,500.00	212.35
Real Estate in Eden, Bar Harbor, Maine,	10,000.00	.....

Hamilton Kuhn Memorial (part),

18,000 Burl. & Mo. in Nebr. non-ex. 6's of 1918, .	16,570.00	540.00
20,000 Kansas C., Mem. & Birm. Inc. 5's of 1934, .	17,600.00	1,000.00
10,000 U. Elec. Sec. Coll. Tr. 5's of 1937, 26th ser.,	10,000.00	500.00
188 shares Edison Elec. Ill'm'ng Co. of Boston,	44,385.00	1,863.00

George C. Shattuck (part),

\$25,000 Kansas City, Fort Scott & Memphis R. R. Cons. M. 6's of 1928 (\$203.70 deducted from in- come for sinking premium),	28,666.70	1,296.30
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**Henry P. Walcott Fellowship in Clinical Medi-
cine (part),**

6,000 J. M. Guffey Petroleum Co. 1st M. 5's of 1912,	6,000.00
5,000 " " " 1913,	5,000.00	.....
2,000 " " " 1914,	2,000.00	.....

MUSEUM OF COMPARATIVE ZOÖLOGY

Maria Whitney,

\$2,000 City of Providence 4's of 1911,	2,000.00	40.00
3,000 " " " 1921,	3,000.00	60.00

OBSERVATORY

Advancement of Astronomical Science (1902).

15 shares Calumet & Hecla Mining Co.,	9,000.00	465.00
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Advancement of Astronomical Science (1901),

Real Estate in Cambridge,	2,476.81
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Amounts carried forward, \$1,611,538.40 \$52,497.64

	Principal.	Net Income.
Amounts brought forward,	\$1,611,538.40	\$52,497.64

**PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY
AND ETHNOLOGY**

Peabody Building (part),	} \$54,000 Kansas & Mis- souri R. R. 1st M. 5's of 1922,	{	11,512.72	622.32
Peabody Collection (part),			19,218.64	1,038.84
Peabody Professor (part),			19,218.64	1,038.84
Thaw (part) (\$8.47 deducted from income for sinking premium),				
\$20,000 Girard Point Storage Co. 1st M. 3½'s of 1940,			20,254.25	691.53

ARNOLD ARBORETUM

Robert Charles Billings,		
\$5,000 Butte Water Co. 1st M. 5's of 1921,	4,000.00	125.00

BUSSEY INSTITUTION

Woodland Hill,		
Laboratory of Comparative Pathology building, . .	20,658.86	.....

SPECIAL FUNDS

Bussey Trust (part),		
Real Estate in Boston,	381,972.12	22,996.06
Fund of the Class of 1834,		
Policy of Mass. Hospital Life Insurance Co., . . .	1,000.00	41.25
Fund of the Class of 1844,		
Policy of Mass. Hospital Life Insurance Co., . . .	6,500.00	268.13
Fund of the Class of 1853,		
Policy of Mass. Hospital Life Insurance Co., . . .	3,725.00	153.66
Calvin and Lucy Ellis Aid (part),		
Real Estate in Boston (half interest in),	22,500.00	212.36
Charles L. Hancock Bequest (part),		
Real Estate in Chelsea and Chicago,	65,001.00	3,125.52
Anonymous,		
20,000 Massachusetts 3's of 1930,	20,000.00	300.00
5,000 " " 1939,	5,000.00	.....
19,000 " " 1941,	19,000.00	. . .
Robert Troup Paine (accumulating) (\$187.38 deducted from income for sinking premiums),		
\$38,000 Massachusetts 3½'s of 1913,	38,506.63	1,185.25
5,000 " " 1916,	5,125.14	154.15
12,000 " " 1935,	12,256.14	199.08
4,000 " " 1938,	4,298.61	59.14
George Smith Bequest (part),		
\$10,000 Du Quoin, Ill., Water Works Co. 6's of 1901,	1.00	.....
20,000 Laclede Gas Light Co. 5's of 1919, . . .	20,000.00	1,000.00
32,000 United States Steel Corporation 5's of 1963,	24,000.00	1,600.00
200 shares Laclede Gas Light Co., preferred, . .	18,800.00	1,000.00
Amounts carried forward,	\$2,354,089.15	\$88,308.77

	Principal.	Net Income.
Amounts brought forward,	\$2,354,089.15	\$88,308.77
Frederick Sheldon (part), (rec'd during year),		
\$2,000 New York Gas & Electric Light, Heat & Power Co. 4's of 1949,	1,300.00	80.00
2,000 Twenty-eighth and Twenty-ninth Street Crosstown Ry. 1st M. 5's of 1996,	500.00	.....
20 shares Astor Trust Co.	6,000.00	160.00
23 " Bank of America,	10,350.00	299.00
82 " Consolidated Gas Co. of New York,	6,734.25	328.00
11 " Corn Exchange Bank,	2,750.00	176.00
100 " Manhattan Trust Co.,	12,900.00	180.00
23 " Mexican Telegraph Co.	4,370.00	172.50
50 " New York Loan & Improvement Co.,	6,500.00	300.00
7 " Newport Trust Co.,	1,050.00	28.00
11 " Newport Water Works,	1,100.00	33.00
50 " Ontario Silver Mining Co.,	200.00	.....
160 " U. S. Life Insurance Co.,	1,815.00	63.00
100/15000th Trust Estate Hastings & Dak. Ry. Co.,	300.00	175.00
Gordon McKay Endowment (part), (\$1,208.00 deducted from income for sinking premium),		
\$59,000 American Agr. Chem. Co. 5's of 1928 (sold during the year), . . . . .	.....	1,343.89
120,000 American Tel. & Tel. 4's of 1929,	114,000 00	2,400.00
50,500 Atch., Top. & Sante Fé Gen. M. 4's of 1995 (sold during the year), . . . . .	.....	532.51
2,000 Burl. & Mo. in Nebr. non-ex. 6's of 1918 (sold during the year), . . . . .	.....	21.50
17,000 Chicago, Burl. & Quincy 4's of 1921 (sold during the year), . . . . .	.....	221.56
8,000 General Electric Conv. 5's of 1917,	11,600.00	400.00
8,000 Interborough Rapid Transit 5's of 1952,	8,610.00	2,207.50
206,000 Interborough R.T.Conv. 6% Notes of 1911,	212,127.00	6,972.00
35,000 Kansas City Railway & Light 6's of 1912,	35,000.00	1,575.00
8,000 Lake Shore & M. S. Deb. 4's of 1928 (sold during year), . . . . .	.....	145.78
20,000 Main Central Improv. A, 4½'s of 1916,	20,200.00	450.00
39,000 Minneapolis General Electric 5's of 1934,	39,495.00	2,109.44
20,000 New York Central & H. R. 4's of 1934 (sold during year), . . . . .	.....	364.44
\$100,000 Kanawa & Michigan 5's of 1927,	95,500.00	638.89
\$80,000 New York, N. H. & H. Deb. 4's of 1955,	78,800.00	1,600.00
61,000 N. Pacific-Great N. Joint 4's of 1921,	59,780.00	1,830.00
40,000 Puget Sound Electric 5's of 1910,	38,800.00	1,100.00
12,000 " " 5's of 1932,	11,760.00	633.33
6,000 Seattle Electric Cons. 5's of 1929 (sold during year), . . . . .	.....	136.67
40,000 Wabash Equip. Ser. C. 4½'s of 1910 and 1915,	38,800.00	900.00
300 shares Great Northern	44,250.00	2,100.00
240 " Northern Pacific,	35,400.00	1,680.00
150 " Pennsylvania	10,125.00	450.00
Amounts carried forward,	\$3,264,205.40	\$120,115.78

	Principal.	Net Income.
Amounts brought forward, . . .	\$3,264,205.40	\$120,115.78
Price Greenleaf. (\$255.57 deducted from income for sinking premiums.) The total amount of this Fund is \$794,997.48, which is invested as follows :		
\$70,000 Broadway Realty Co. Purchase money 1st M. 5's of 1926,	73,039.44	3,315.80
11,000 Burl. & Mo. River R. R. in Nebraska non-exempt 6's of 1918,	10,000.00	330.00
25,000 Central Crosstown Coll. Trust 5 % Notes of 1909,	21,343.75	.....
43,500 Central Vermont R'y 1st M. 4's of 1920, .	37,845.00	1,740.00
3,000 Chicago, Burl. & Quincy R. R. 4's of 1922,	2,880.00	120.00
50,000 Chicago Junction Railways & Union Stock Yards Coll. Trust 5's of 1915,	47,000.00	1,250.00
8,000 Kansas City, Fort Scott & Memphis cons. M. 6's of 1928,	9,284.72	408.63
50,000 Metropolitan Tel. & Tel. Co. 1st M. 5's of 1918,	49,750.00	2,500.00
34,000 New York Central & Hudson River R. R. (Michigan Central Collateral) 3½'s of 1998,	28,412.10	1,190.00
32,000 Northern Pacific-Great Northern Joint 4's (C. B. & Q. collateral) of 1921,	19,993.55	960.00
50,000 Seattle Electric Co. 5 % Notes of 1911, . .	49,333.33	2,500.00
50,000 Union Pacific R.R. 1st M. & L.G. 4's of 1947,	44,625.00	1,000.00
50,000 Note of Arlington Mills,	50,000.00	1,000.00
25,000 Hamilton Manufacturing Co.,	25,000.00	1,162.15
50,000 Note of Massachusetts Cotton Mills, . . .	50,000.00	1,000.00
360 shares Boston & Lowell R. R.,	46,800.00	1,440.00
237 " Fitchburg R. R., preferred,	22,306.27	888.75
56 " Great Northern, preferred,	13,125.00	392.00
40 " " " Iron Ore Properties, . . . . .	.....	60.00
355 " Old Colony R. R.,	63,190.00	1,863.75
27 " N. Y. Central & Hudson River R. R., . .	2,866.28	108.00
290 " Northern R. R. (N. H.),	29,290.00	1,305.00
52 " West End Street Railway, preferred, .	4,305.56	104.00
34 " Central Vermont R'y,	428.72	.....
707 " Pennsylvania R. R.,	51,856.04	2,121.00
19 " Boston Real Estate Trust,	25,230.25	855.00
100 " Paddock Building Trust,	10,000.00	350.00
Cash in American Trust Co.,	7,092.47	54.81
	<u>\$4,059,202.88</u>	<u>\$148,134.67</u>

SUMMARY :

Cash, Exhibit A,	\$7,092.47
Securities, Exhibit A,	2,646,296.83
Land and Buildings, Exhibit A,	1,405,813.58
	<u>\$4,059,202.88</u>
Interest and Dividends, Exhibit B,	90,021.28
Rents, Land and Buildings, Exhibit B,	58,113.39
	<u>\$148,134.67</u>

SCHEDULE 2

SECURITIES — GENERAL INVESTMENTS

June 30, 1910

Mortgages and Other Loans.	Principal.	Income.
Mortgages,	\$872,000.00	
Advances to Bussey Trust,	312,499.08	
Abbeville Cotton Mills Note,	50,000.00	
American Woolen Co.'s Note	100,000.00	
Curtis and Sanger's Note,	50,000.00	
Darlington Manufacturing Co.'s Note,	50,000.00	
Hartford Carpet Corporation's Notes,	50,000.00	
Massachusetts Cotton Mills Note,	50,000.00	
Merchants & Miners' Transportation Co.'s Note,	40,000.00	
Merrimack Manufacturing Co.'s Note,	25,000.00	
Otis Elevator Co.'s Note,	50,000.00	
Westinghouse Electric & Manufacturing Co.'s Note	50,000.00	
	<u>\$1,699,499.08</u>	<u>\$78,088.01</u>

Public Funds.

£3,500 Imperial Japanese Sterling 4½'s of 1925,	\$15,334.55	\$767.02
\$94,000 United States of Mexico 4's of 1954,	89,250.00	3,800.00
	<u>\$102,584.55</u>	<u>\$4,567.02</u>

Railroad Bonds.

\$100,000 Baltimore & Ohio 1st M. 4's of 1948,	\$96,625.00	\$4,000.00
100,000 B. & O. (S. W. Div.) 1st M. 3½'s of 1925,	89,750.00	1,750.00
100,000 Baltimore & Ohio (Pittsburg, Lake Erie & West Virginia) Ref. M. 4's of 1941,	99,250.00	4,000.00
125,000 Bangor & Aroostook Cons. Ref. M. 4's of 1951,	118,750.00	2,500.00
68,000 Burl. & Mo. in Nebr. non-ex. 6's of 1918,	68,600.00	2,268.00
444,000 Chicago, Burl. & Quincy 3½'s of 1949,	455,551.49	7,473.80
150,000 " " Gen. M. 4's of 1958,	145,250.00	6,000.00
200,000 C. B. & Q. (Illinois Div.) 4's of 1949,	200,866.68	3,977.78
100,000 Chicago & No. Western Gen. M. 3½'s of 1987,	100,911.95	3,488.23
100,000 Chicago, Rock Island & Pacific Gen. M. 4's of 1988,	106,130.18	1,920.90
100,000 Chicago Terminal Transfer 1st M. 4's of 1947,	(sold during year)	9,989.57
200,000 Duluth, Missabe & Northern General M. 5's of 1941,	214,523.81	4,523.81
100,000 Indiana, Ill. & Iowa 1st M. 4's of 1950,	96,500.00	2,000.00
200,000 Kansas City, Fort Scott & Memphis Cons. M. 6's of 1928,	234,758.64	10,068.97
114,000 Kansas City, Memphis & Birmingham (assented) Income 5's of 1934,	103,500.00	5,700.00
Amounts carried forward,	<u>\$2,130,967.75</u>	<u>\$69,661.06</u>

	Principal.	Income.
Amounts brought forward, . . .	\$2,130,967.75	\$69,661.06
Railroad Bonds (<i>continued</i>).		
\$100,000 Lake Shore & Michigan Southern Deb.		
4's of 1928,	95,000.00	4,000.00
300,000 Long Island Unified M. 4's of 1949, . .	283,257.50	12,000.00
200,000 Louisville & Jeffersonville Bridge Co.		
1st M. 4's of 1945,	191,000.00	8,000.00
100,000 Minneapolis Union 1st M. 5's of 1922, .	101,597.96	2,366.83
100,000 Montana Central 1st M. 6's of 1937, . .	130,796.85	1,859.37
300,000 New York Central & H. R. (L. S. & M. S. Coll.) 3½'s of 1998,	294,464.40	10,500.00
55,000 New York, New Haven & Hartford Con- vertible 3½'s of 1956,	61,377.44	823.86
25,000 New York, New Haven & Hartford Con- vertible Deb. 6's of 1948,	25,000.00	750.00
100,000 New York, New Haven & Hartford Deb.		
4's of 1955,	105,625.00	1,875.00
200,000 New York, Ontario & Western Ref. M.		
4's of 1992,	209,501.10	7,884.13
343,000 Northern Pacific-Great Northern Joint		
4's (C. B. & Q. Coll.) of 1921, . . .	164,325.92	10,290.00
100,000 Oregon Short Line Cons. 1st M. 5's of 1946,	115,010.74	2,083.03
100,000 Oregon Short Line Ref. M. 4's of 1929,	96,875.00	4,000.00
52,000 Pennsylvania Co. 3½'s of 1916,	49,875.00	1,907.50
250,000 Richmond-Washington Co. Coll. Trust		
4's of 1943, Series C,	255,476.55	9,834.05
100,000 St. Louis & San Francisco Ref. M. 4's of 1951,	97,125.00	2,000.00
£40,000 St. Paul, Minneapolis & Manitoba (Paci- fic Extension) 4's of 1940,	200,588.72	3,657.13
\$100,000 Southern Pacific 1st Ref. M. 4's of 1955,	97,062.50	2,000.00
100,000 Southern Pacific Conv. 4's of 1929 . .	99,625.00	3,000.00
200,000 Terminal R. R. Association of St. Louis		
Gen. M. Ref. 4's of 1953,	200,000.00	4,000.00
400,000 Union Pacific 1st M. & L. G. 4's of 1947,	353,114.75	8,000.00
100,000 " " Conv. 4's of 1927,	95,392.50	2,000.00
	<u>\$5,453,059.68</u>	<u>\$172,491.96</u>

Traction Bonds.

\$150,000 Boston & Northern Street R'y 1st M.		
Ref. 4's of 1954,	\$139,000.00	\$3,000.00
86,000 Central Crosstown Coll. Trust 5% Notes of 1909,	85,375.00	.....
100,000 Chicago Railways 1st M. 5's of 1927, .	100,944.45	4,527.78
300,000 Interborough-Metropolitan Coll. Trust		
4½'s of 1956,	254,782.50	13,500.00
300,000 Interborough Rapid Transit Co. Con- vertible 6% Gold Notes of 1911, . .	297,716.38	13,142.00
Amounts carried forward,	\$877,818.33	\$34,169.78

	Principal.	Income.
Amounts brought forward,	\$877,818.33	\$34,169.78
Traction Bonds (<i>continued</i>).		
\$100,000 Interborough Rapid Transit Co. Gold M. 5's of 1952 (sold during year), . . . . .	.....	2,020.66
25,000 Kansas City Terminal R'y 1st M. Gold 4's	24,437.50	.....
100,000 Metrop. West Side Elevated 4's of 1938,	91,746.25	4,000.00
100,000 " " " Ext. M. 4's of 1938,	97,000.00	2,000.00
150,000 Old Colony Street R'y 1st M. Ref. 4's of 1954,	139,000.00	3,000.00
100,000 Second Ave. (N. Y.) Con. M. 5's of 1948,	115,789.60	.....
93,000 Third Avenue (N. Y.) 1st Consol. M. 4's of 2000,	94,052.36	.....
100,000 United Traction & Electric Co. 1st M. 5's of 1933,	110,036.34	4,563.63
	<u>\$1,549,880.38</u>	<u>\$49,754.07</u>
Sundry Bonds.		
\$200,000 American Tel. & Tel. Co. 4's of 1929, .	\$196,000.00	\$4,000.00
100,000 Boston Electric Light Co. 1st Cons. M. 5's of 1924,	109,852.55	4,320.51
145,000 Broadway Realty Co. Purchase money 1st M. 5's of 1926,	152,981.77	6,766.25
200,000 Calumet & Hecla Mining Co. 5% Coupon Notes of 1919,	201,800.00	9,161.11
140,000 Chicago Edison Co. 1st M. 5's of 1926, .	144,646.40	6,709.60
250,000 Chicago Junction Railways and Union Stock Yards Coll. Trust 5's of 1915, .	250,100.70	6,229.85
100,000 Chicago Junction Railways and Union Stock Yards 4's of 1940,	98,500.00	4,000.00
150,000 Detroit Edison Co. 1st M. 5's of 1933, .	152,781.94	2,716.56
143,000 General Electric Co. Convertible Deb. 5's of 1917,	149,146.39	7,054.88
100,000 Madison River Power Co. 1st M. 5's of 1935,	85,000.00	5,000.00
50,000 Massachusetts Gas Co.'s S. F. 4½'s of 1929,	48,375.00	1,125.00
100,000 Metrop. Tel. & Tel. Co. 1st M. 5's of 1918,	99,500.00	5,000.00
100,000 Minneapolis General Electric Co. Gen. M. 5's of 1934,	102,076.30	4,915.26
100,000 Montreal Light, Heat and Power Co. 1st M. Coll. Trust 4½'s of 1932,	100,716.61	2,216.66
100,000 Municipal Gas & Electric Co. of Roches- ter, N. Y., 1st M. 4½'s of 1942,	100,000.00	4,500.00
100,000 New England Tel. & Tel. Co. 5's of 1916,	105,647.02	4,058.82
75,000 New York Tel. Co. Gen. M. Gold S. F. 4½'s,	71,568.75	795.63
100,000 North American Co. Coll. Trust 5% Notes of 1912,	93,625.00	5,000.00
Amounts carried forward,	\$2,262,318.43	\$83,570.13

GENERAL INVESTMENTS

	Principal.	Income.
Amounts brought forward, . . .	\$2,262,318.43	\$83,570.13
Sundry Bonds (<i>continued</i>).		
\$100,000 Pejescot Paper Co. 1st M. 5's of 1917 and 1921,	99,000.00	4,541.67
200,000 Portland Gen'l Elec. 1st M. 5's of 1935,	203,076.93	4,369.99
100,000 Railway & Light Securities Co. Coll. Trust 5's of 1935,	100,852.30	7,500.00
100,000 Railway & Light Securities Co. Coll. Trust 5's of 1939, 2d series,	100,000.00	1,535.34
100,000 Southern Power Co. 1st M. Gold 5's,	98,000.00	.....
160,000 St. Louis National Stock Yards Co. 1st M. 4's of 1930,	157,650.00	3,200.00
100,000 Seattle Electric Co. 5% Notes of 1911,	98,666.67	5,000.00
100,000 Tacoma Railway & Power Co. 1st M. 5's of 1929,	100,980.00	4,591.11
50,000 United Electric Securities Co. Coll. Trust 5's of 1936, 24th series,	50,000.00	2,500.00
75,000 United Electric Securities Co. Coll. Trust 5's of 1938, 27th series,	75,000.00	3,718.75
75,000 United Electric Securities Co. Coll. Trust 5's of 1939, 29th series,	76,811.40	2,009.32
100,000 Washington Water Power Co. 5's of 1939,	100,386.67	2,486.67
50,000 Wood Worsted Mills Corp'n 4½% Cons. and Equip. Gold Notes of 1910, . . . (sold during year)		2,250.00
100,000 Western Elec. Co. Coll. Trust. Gold 4½% Notes,	99,125.00	.....
	<u>\$3,621,867.40</u>	<u>\$127,272.98</u>
Railroad Stocks.		
700 shares Baltimore & Ohio,	\$70,362.50	\$4,200.00
507 " Chicago, Milwaukee & St. Paul, pfd,	50,670.58	3,549.00
1268 " Chicago, Milwaukee & St. Paul,	177,425.94	8,876.00
2282 " Chicago & No. Western,	319,255.55	5,687.50
1337 " Great Northern, preferred,	294,558.56	9,359.00
955 " Great Northern Iron Ore Properties, }		
800 " Louisville & Nashville,	93,924.00	5,200.00
8 " Louisville Property	1.00	.....
700 " Manhattan,	92,762.50	3,675.00
1665 " New York Central & Hudson River,	151,173.21	7,294.50
1000 " (50% paid) New York, New Haven & Hartford,	88,101.79	836.00
1000 " Northern Pacific,	115,315.00	7,000.00
5228 " Pennsylvania,	382,350.30	14,313.00
500 " Union Pacific Ry. Stock,	91,437.50	1,250.00
	<u>\$1,927,338.43</u>	<u>\$72,672.50</u>

Manufacturing and Telephone Stocks.

Principal.

Income.

2000 shares American Smelters Securities Co. 5% cumulative preferred, series B, . . .	\$196,000.00	\$10,000.00
1320 " American Tel. & Tel. Co.,	161,610.52	7,920.00
12 " Amoskeag Manufacturing Co.,	3,654.00	720.00
1000 " General Electric Co.,	113,575.00	6,000.00
187 " Merrimack Manufacturing Co.,	18,615.10	.....
24 " Pacific Mills,	16,668.29	3,840.00
	<u>\$510,122.91</u>	<u>\$28,480.00</u>

Real Estate Trust Stocks.

1000 shares Barristers Hall,	\$92,766.00	\$2,250.00
2500 " Department Store,	220,291.88	11,250.00
1000 " Essex Street,	100,000.00	3,000.00
750 " Kimball Building,	75,000.00	1,687.50
1089 " Paddock Building,	104,363.72	3,811.50
1000 " Post Office Square Building,	103,000.00	3,250.00
1875 " Western Real Estate Trust,	196,500.00	9,000.00
1000 " St. Paul Business Real Estate Assoc.	100,000.00	.....
	<u>\$991,921.60</u>	<u>\$34,249.00</u>

Sundry Stocks.

538 shares Edison Elec. Illum. Co., Boston, Mass.,	\$124,927.50	\$6,187.00
1500 " Massachusetts Gas Companies, pref'd,	132,107.00	6,000.00
	<u>\$257,034.50</u>	<u>\$12,187.00</u>

SUMMARY:

Mortgages and Notes,	\$1,699,499.08	\$78,088.01
Public Funds,	102,584.55	4,567.02
Railroad Bonds,	5,453,059.68	172,491.96
Traction Bonds,	1,549,880.38	49,754.07
Sundry Bonds,	3,621,867.40	127,272.98
Railroad Stocks,	1,927,338.43	72,672.50
Manufacturing and Tel. Stocks,	510,122.91	28,480.00
Real Estate Trust Stocks,	991,921.60	34,249.00
Sundry Stocks,	257,034.50	12,187.00
Total, Exhibit A,	<u>\$16,113,308.53</u>	
Total, Exhibit B,		<u>\$579,762.54</u>

LAND AND BUILDINGS—GENERAL INVESTMENT

June 30, 1910

Real Estate in Boston.	Principal.	Net Income.
Adams Estate, Washington Street,	\$261,683.02	\$16,051.58
Amory Estate, Franklin Street,	165,615.81	6,403.49
Cowdin Estate, Haymarket Square,	36,000.00	1,848.00
Estate, 20 and 21 Haymarket Square,	58,913.52	2,355.93
Faneuil Hall Square Estate,	197,047.80	6,246.63
Gerrish Block, Blackstone and North Streets, . .	192,875.75	4,492.69
Gray Estate, Washington Street,	959,348.34	53,607.62
Lowell Estate, Washington Street,	464,368.91	29,013.23
Old Boston Music Hall Estate,	365,012.89	7,591.86
Townsend Estate, Hawkins Street,	52,227.74	2,315.19
Union and Friend Streets,	1,000.00	.....
Webb Estate, Washington Street,	192,866.24	9,666.21
Total, Exhibit A,	<u>\$2,946,960.02</u>	
Total, Exhibit B,		<u>\$139,592.43</u>

SCHEDULE 4

FUNDS AND GIFTS

June 30, 1910

[The date following the title of a Fund shows the year of its establishment.]

Principal, Aug. 1, 1909.	UNIVERSITY FUNDS	Principal, June 30, 1910.
.....	Anonymous (1910),	\$44,000.00
\$13,779.68	Walter F. Baker (1909), . . . . .	.....
2,000.00	William H. Baldwin, Jr. (1906),	2,000.00
1,143.00	Band Music (1903),	1,143.00
4,950.00	Andrew Bigelow (1898),	4,950.00
5,000.00	Stanton Blake (1889),	5,000.00
4,771.33	Charlotte F. Blanchard (1891),	4,771.33
5,250.00	Samuel D. Bradford (1866),	5,250.00
50,000.00	Martin Brimmer (1907),	50,000.00
100,000.00	James C. Carter (1906),	100,000.00
12,500.00	John W. Carter (1898),	12,500.00
82,689.03	Class of 1883 (1908),	87,518.36
9,535.81	Edward Erwin Coolidge (1906),	9,612.25
154.98	Thomas Cotton (1727),	153.67
33,835.06	John Cowdin (1888),	33,835.06
115,966.56	George B. Dorr (1882),	115,966.56
48,458.50	George Draper (1892),	48,458.50
56,788.00	R. H. Eddy (1901),	56,788.00
101,225.49	Harvard Ellis (1895),	101,225.49
25,000.00	Richard W. Foster (1905),	20,918.57
5,322.09	John Davis Williams French (1901),	5,322.09
20,571.18	Gore (1834),	20,571.18
25,000.00	John C. Gray (1881),	25,000.00
20,000.00	Walter Hastings (1888),	20,000.00
50,000.00	Henry L. Higginson (1906),	100,000.00
5,000.00	George Baxter Hyde (1895),	5,000.00
4,000.00	Insurance and Guaranty (1860),	4,000.00
16,871.63	Leonard Jarvis (1859),	16,871.63
10,000.00	Henry P. Kidder (1894),	10,000.00
10,000.00	Joseph Lee (1802),	10,000.00
10,000.00	Theodore Lyman (1898),	10,000.00
81,950.54	Henry T. Morgan (1883), . . . . .	.....
15,750.00	Israel Munson (1844),	15,750.00
53,619.37	Henry S. Nourse (1904),	50,000.00
113,817.44	Francis E. Parker (1886),	113,817.44
4,005.59	George F. Parkman (1909),	4,005.59
30,000.00	William Perkins (1888),	30,000.00
50,268.20	Henry L. Pierce (1898),	50,000.00
167,622.51	Henry L. Pierce (Residuary) (1898),	157,098.14
63,714.70	President's (1883),	63,789.30
\$1,430,560.69	. . Amounts carried forward,	\$1,415,316.16

Principal, Aug. 1, 1909.		Principal, June 30, 1910.
\$1,430,560.69	. . Amounts brought forward, . .	\$1,415,316.16
367,560.23	Retiring Allowance (1879),	370,031.87
11,000.00	Riverside (1903),	11,000.00
23,370.03	John L. Russell (1889),	23,370.03
2,058.01	Mary R. Searle (1903),	2,116.62
46,913.13	Isaac Sweetser (1894),	46,913.13
5,000.00	Seth Turner (1883),	5,000.00
100,000.00	William F. Weld (1893),	100,000.00
		\$1,973,747.81

COLLEGE FUNDS

12,457.10	John W. P. Abbot (1874), . . .	\$12,955.38
27,748.64	Alford Professorship (1765), . . .	27,748.64
7,806.86	Daniel Austin (1879),	7,806.86
5,787.61	William H. Baldwin, Jr. 1885 (1906),	5,787.61
666.67	John Barnard (1777),	666.67
15,000.00	Robert Charles Billings , for Gray Herbarium (1903),	15,000.00
1,050.00	John A. Blanchard (1873), . .	1,050.00
39,780.00	Botanic Department (1880),	39,780.00
28,337.40	Boylston Professorship (1772), . .	28,337.40
850.00	Centennial Fund for the Botanic Gar- den (1907), . . . . .	.....
11,276.39	Francis James Child Memorial (1897),	11,224.65
7,105.12	Classical Publication Fund of the Class of 1856 (1888),	7,105.12
103,669.41	Class of 1880 (1905),	103,669.41
76,431.06	Fund of the Class of 1882 (1907),	82,055.71
255.49	Class of 1883 Special Fund (1908),	265.69
82,549.91	Class of 1884 (1909),	97,549.91
.....	Class of 1885 Gift (1910),	105,097.01
150,637.54	Class Subscription (1870),	150,637.54
322,158.89	Edward W. Codman (1905), . .	322,158.89
1,500.00	John Coggan (1652),	1,500.00
58,392.10	T. Jefferson Coolidge , for Re- search in Physics,	58,018.63
4,039.90	Paul Dudley (1751),	4,101.50
109,071.42	Eaton Professorship (1903), . . .	111,434.26
21,619.50	Eliot Professorship (1814),	21,619.50
10,000.00	Eliot " (Jonathan Phillips's gift) (1854),	10,000.00
3,500.01	Erving Professorship (1791), . . .	3,500.01
35,990.99	Fisher " (1834),	35,990.99
434.82	Henry Flynt (1760),	431.07
16,240.38	Fund for Permanent Tutors (1796), .	16,240.38
1,033.57	Fund for Religious Services (1887), .	1,033.57
\$3,141,852.87	. . Amounts carried forward, . . .	\$1,282,766.40 \$1,973,747.81

Principal, Aug. 1, 1909.		Principal, June 30, 1910.
\$3,141,852.87	Amounts brought forward, . . .	\$1,282,766.40 \$1,973,747.81
14,436.24	Godkin Lectures (1903),	15,013.68
7,478.23	Gospel Church (1868),	7,627.79
32,711.00	Asa Gray Memorial (1898), . . .	32,711.00
21,491.67	Asa Gray Professorship of Systematic Botany (1897),	21,451.25
200,096.86	Gurney (1888),	200,096.86
6,179.43	George Silsbee and Ellen Sever Hale (1904),	6,426.59
15,314.26	Harvard Oriental Series (1899), . .	15,289.80
20,655.91	Herbarium (1865),	20,655.91
20,217.08	Hersey Professorship (1772), . . .	20,217.08
21,744.18	Hersey Professorship (Thomas Lee's gift) (1856),	21,744.18
520.00	Thomas Hollis (for Treasurer) (1721),	520.00
34,517.60	Hollis Professorship of Divinity, .	34,517.60
Composed of these Funds:—		
	William Dummer (1762),	
	Daniel Henchman (1742),	
	Thomas Hollis (1721),	
	Jonathan Mason (1798),	
	James Townsend (1738).	
3,747.33	Hollis Professorship of Mathematics,	3,747.33
Composed of these Funds:—		
	Thomas Brattle (1713),	
	William Dummer (1762),	
	Daniel Henchman (1758),	
	Thomas Hollis (1726).	
1,000.00	Thomas Hubbard (1774), . . .	1,000.00
444.44	Nathaniel Hulton (1695), . . .	444.44
233.33	Thomas Hutchinson (1739), . .	233.33
5,922.86	Ingersoll Lecture (1894),	6,159.78
11,285.56	Lectures on Political Economy (1889),	11,537.00
15,796.97	Lee Fund for Reading (1863), . . .	15,796.97
110,043.29	Henry Lee Professorship (1900), .	110,043.29
7,903.69	Joseph Lovering for Physical Research (1891),	7,720.00
66,407.31	Lowell Fund for a Botanic Garden (1882) (formerly Professorship of Natural History, 1805),	68,257.31
.....	Woodbury Lowery Memorial (1910),	20,040.72
50,000.00	Arthur T. Lyman (1904), . . .	50,000.00
43,062.93	McLean Professorship (1834), . .	43,062.93
1,252.18	Music Department (1903),	1,302.26
333.33	John Newgate (1650),	333.33
25,902.63	William Belden Noble Lectures (1898),	26,699.44
\$3,880,551.18	Amounts carried forward, . . .	\$2,045,416.27 \$1,973,747.81

Principal, Aug. 1, 1909.		Principal, June 30, 1910.
\$3,880,551.18	. . . Amounts brought forward, . . .	\$2,045,416.27 \$1,973,747.81
101,910.75	Francis Greenwood Peabody Endowment (1905),	101,216.39
14,547.36	Daniel H. Peirce (1876),	14,605.54
435.48	James Mills Peirce Bequest (bal.).	435.48
21,000.00	Perkins Professorship (1841), . .	21,000.00
31,500.00	Jonathan Phillips (1861), . . .	31,500.00
75,000.00	Physical Laboratory Endowm't (1881),	75,000.00
25,020.19	Plummer Foundation (1854), . .	25,020.19
52,500.00	Pope Professorship (1868),	52,500.00
189,655.98	Sarah E. Potter Endowment Fund,	189,655.98
224,419.62	Professorship of Hygiene (1899), . .	238,732.51
51,900.48	" " (1902), . .	51,934.07
22,225.00	" " (1908), . .	22,073.15
540,000.00	Nelson Robinson, Jr. (1899), .	545,000.00
197,733.66	Nelson Robinson, Jr. Additional (1906),	195,821.18
3,535.00	Ezekiel Rogers (1701),	3,535.00
50,152.61	Eliza O. and Mary P. Ropes , .	117,134.99
56,368.73	Rumford Professorship (1819), . .	56,368.73
1,514.00	Daniel Russell (1679),	1,514.00
2,000.00	John L. Russell (1889),	2,000.00
60,000.00	Gurdon Saltonstall (1901), . .	60,000.00
5,292.57	George William Sawin (1890),	5,512.54
5,556.23	Robert W. Sayles (1906), . . .	5,000.00
5,030.56	Sayles , for Summer Course in Geol- ogy (1909),	10,531.80
23,139.83	Smith Professorship (1816), . . .	23,139.83
2,500.00	William M. Spackman (1905),	2,500.00
11,791.87	Josiah Stickney (1899),	11,791.87
2,029,354.40	Teachers' Endowment (1905), . . .	2,042,744.93
16,481.96	John E. Thayer (1885),	16,303.16
1,180.52	Elizabeth Torrey (1896), . . .	1,227.72
12,960.00	Henry Warren Torrey (1890), .	13,552.42
111,345.44	Twenty-fifth Anniversary Fund of the Class of 1881 (1906),	112,705.44
101,102.26	Unknown Memorial (1898), . . .	101,358.68
50,000.00	Henry Villard (1902),	50,000.00
40,000.00	Wales Professorship (1903), . . .	40,000.00
16,960.55	Samuel Ward (1680),	17,638.95
6,497.77	Cyrus M. Warren (1893), . . .	6,463.95
118,749.04	Henry C. Warren (1899), . . .	119,213.37
7,442.62	Sylvester Waterhouse (1896), .	7,740.34
50,000.00	Increase Sumner Wheeler (1889),	50,000.00
70.06	Jerome Wheelock (1903), . . .	83.10
1,302.37	Chauncey Wright (1884), . . .	1,354.45 6,489,326.03
\$8,218,728.09	. . . Amounts carried forward,	\$8,463,073.84

Principal,
Aug. 1, 1909.

Principal, June 30, 1910.

\$8,218,728.09	. . Amounts brought forward,	\$8,463,073.84
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GIFTS FOR SPECIAL USE (BALANCES)

650.00	Anonymous Gift for Special Aid, . .	\$150.00
9,495.04	For Equipment, Dep't of Architecture,	6,633.73
819.91	Bermuda Biological Station,	1,099.53
730.96	Cases, etc., at the Botanic Garden,	745.57
30.27	F. P. Bonney Gift,	30.27
13.97	Laboratory of Metallurgical Chemistry,	13.97
6.23	Department of Classics, . . . . .	.....
8.60	Common Room in Conant Hall,	8.60
456.50	Dane's Gift, . . . . .	.....
.....	Harvard Economic Studies,	327.24
.13	Electrical Apparatus, . . . . .	.13
.....	Department of Forestry, Marsh House,	15.00
78.08	Experimental Phonetics,	78.08
72.45	French Department Library,	70.04
136.92	For the Department of Forestry, . . . . .	.....
14.50	Geographical Department, Lantern Slides,	14.50
10.00	Geographical Department Models, . . . . .	.....
.....	Department of Geology, Exhibition Case for Photographs,	84.00
322.52	Collections for a Germanic Museum,	322.52
24.29	Gift for housing visiting German Professor, . . . . .	.....
36.15	Augustus Hemenway Gift,	36.15
966.44	Department of History, Books,	1,339.87
500.00	Gift for Apparatus for Professor Jeffrey's Courses,	94.50
20.00	Gift for Land in New Hampshire,	20.00
20.08	Lowell Memorial Library,	10.23
24.22	Arthur T. Lyman Gift,	24.18
122.62	Edward Mallinckrodt Gift,	122.62
30.00	Department of Mathematics,	30.00
.....	International Committee on Teaching Mathematics,	200.00
9.60	Anonymous Gift (Mineralogy Exhibits),	9.60
100.00	Sir John Murray Gift,	100.00
114.32	Philosophical Library,	61.18
118.69	Physical Research,	49.79
3,655.98	Plantation of Shrubs, etc.,	3,729.09
70.86	Harvard Psychological Review,	76.88
25.00	Political Economy Department, Library,	25.00
\$8,237,412.42	. . Amounts carried forward,	\$15,522.27 \$8,463,073.84

Principal, Aug. 1, 1909.		Principal, June 30, 1910.
\$8,237,412.42	. . Amounts brought forward, . . .	\$15,522.27 \$8,463,073.84
10,675.79	Decorating the front of the Nelson Robinson Jr. Hall,	6,594.22
.....	Nelson Robinson Special Expense, .	2,301.01
1,604.68	Salaries,	1,104.68
1,810.90	Sanskrit Department,	2,118.90
344.11	Semitic Library,	134.20
818.73	Social Ethics,	1,862.47
847.11	Furnishings of the Department of Social Ethics,	699.03
770.32	Sugar-cane investigation, etc., . . .	785.72
890.83	Summer School Mining Camp, . . .	1,230.57
		32,353.07

FELLOWSHIP

20,116.76	Julia Amory Appleton (1906),	\$20,921.44	
5,605.70	George W. Dillaway (1903), . .	5,604.94	
626.17	Fellowship in Central American Arch- aeology (balance),	26.17	
11,895.70	Ozias Goodwin Memorial (1889),	11,846.54	
11,310.11	Harris (1868),	11,262.51	
25,862.84	Edward William Hooper (1905),	26,322.36	
11,452.24	John Thornton Kirkland (1871),	11,410.32	
12,304.45	Henry Lee Memorial (1889), . .	12,271.61	
19,016.40	Charles Eliot Norton (1901), .	19,066.40	
13,567.97	Robert Treat Paine (1887), . .	13,510.69	
61,542.79	John Parker (1873),	62,129.51	
10,480.17	Francis Parkman (1906), . . .	10,449.37	
.....	Princeton (1910),	10,200.00	
33,249.42	Rogers (1869),	33,454.38	
12,626.95	Henry Bromfield Rogers Memo- rial (1889),	12,607.03	
.....	Social Ethics,	500.00	
150.00	South End House (balance), . . .	.....
12,257.03	John Tyndall (1885),	12,222.31	
11,527.94	James Walker (1881),	11,739.06	
25,054.71	Whiting (1896),	25,156.91	310,701.55

SCHOLARSHIP

3,973.82	Abbot (1852)..	\$3,957.78	
2,631.99	Alford (1785),	2,737.27	
5,459.46	Bartlett (1881),	5,427.82	
5,752.63	Bassett (1876),	5,712.75	
13,996.02	Bigelow (1865),	13,855.86	
.....	Charles Sumner Bird,	200.00	
3,287.38	Samuel A. Borden (1896), . . .	3,418.86	
116,932.73	Bowditch (1864),	116,405.05	
4,705.44	Bright (balance),	4,743.64	
\$8,710,561.71	. . Amounts carried forward, . . .	\$156,459.03	\$8,806,128.46

Principal, Aug. 1, 1909.		Principal, June 30, 1910.
\$8,710,561.71	. . Amounts brought forward, . . .	\$156,459.03 \$8,806,128.46
4,057.00	Browne (1687),	4,044.28
5,739.77	Morey Willard Buckminster (1898),	5,639.37
35,844.77	Burr (1895),	35,678.57
6,275.44	Ruluff Sterling Choate (1884),	6,301.44
10,262.13	George Newhall Clark (1908),	10,147.61
8,801.25	Class of 1802 (1870),	8,778.29
3,391.56	" 1814 (1853),	3,377.24
6,988.22	" 1815 (Kirkland) (1852),	6,967.74
4,861.53	" 1817 (1852),	4,855.97
3,725.52	" 1828 (1882),	3,574.52
5,347.90	" 1835 (1853),	5,336.82
5,438.14	" 1841 (1871),	5,430.66
5,436.77	" 1852 (Dana) (1876), . .	5,429.25
16,736.32	" 1856 (1885),	16,805.76
5,083.29	" 1867 (1886),	5,061.61
5,386.34	" 1877 (1902),	5,376.78
6,377.60	" 1883 (1900),	6,357.72
12,796.67	Crowninshield (1877),	12,838.55
60.00	Warren H. Cudworth (balance),	.....
6,586.99	Francis H. Cummings (1898),	6,575.47
5,678.63	George and Martha Derby (1881),	5,655.79
6,437.26	Julius Dexter (1892),	6,469.74
3,027.63	Orlando W. Doe (1893),	3,048.75
5,603.52	William Samuel Eliot (1875), .	5,577.68
43,289.44	Joseph Eveleth (1896),	43,221.00
2,563.70	Fall River (1893),	2,566.26
6,632.25	Farrar (1873),	6,622.53
4,998.81	George Fisher and Elizabeth Huntington Fisher (1908), . .	4,998.77
12,091.46	Richard Augustine Gambrill (1890),	12,050.10
8,100.13	Charles Haven Goodwin (1889),	8,074.13
4,623.42	Greene (1863),	4,608.34
100.00	Price Greenleaf (balance), . . .	100.00
.....	Harvard Club of Boston,	1,000.00
.....	" " San Francisco, . .	50.00
566.48	" " Washington, D. C. (balance),	456.12
10,721.42	John Appleton Haven (1902), .	10,675.26
25,346.13	William Hilton (1897),	25,459.97
11,399.56	Ebenezer Rockwood Hoar (1895),	11,355.56
6,678.59	Levina Hoar, for the town of Lin- coln, Mass. (1876),	6,645.75
13,877.66	Hodges (1878),	13,850.46
4,204.33	Priscilla Clark Hodges (1907),	4,197.49
\$9,045,699.34	. . Amounts carried forward, . . .	\$491,720.38 \$8,806,128.46

Principal, Aug. 1, 1909.	Principal, June 30, 1910.
\$9,045,699.34 . . . Amounts brought forward, . . .	\$491,720.38 \$8,806,128.46
6,645.75 Hollis (1722),	6,636.59
11,323.63 Henry B. Humphrey (1890), . .	11,276.59
32,480.16 Charles L. Jones (1901),	32,409.36
11,043.67 George Emerson Lowell (1886).	11,035.43
5,789.88 Markoe (1903),	5,771.48
4,404.87 Matthews (balance),	3,720.00
6,598.18 Merrick (1888),	6,587.10
8,757.97 Morey (1868),	8,795.79
6,154.98 Lady Mowlson (1643),	6,151.18
2,973.90 Boston Newsboys' (1906),	2,942.86
6,003.34 Howard Gardner Nichols (1897),	5,993.46
6,351.09 Lucy Osgood (1873),	6,330.13
5,448.94 George Foster Peabody (1902),	5,524.90
4,227.07 James Mills Peirce Scholarship	
(1908),	4,396.15
7,541.48 Pennoyer (1670),	7,768.12
..... Charles Elliott Perkins Scholar-	
ships (1909),	30,000.00
4,707.75 Rebecca A. Perkins (1869), . .	4,896.07
11,813.80 Philadelphia (1904),	11,286.36
1,729.42 Wendell Phillips Mem'l (1895),	1,798.58
4,158.52 William Reed (1907),	4,067.38
350.00 Ricardo Prize (balance),	350.00
1,478.46 Rodger (1883),	1,537.58
3,650.59 Henry Bromfield Rogers (1859),	3,646.63
10,781.66 Nathaniel Ropes, Jr. , Scholarship	
(1909),	11,112.16
15,049.81 James Augustus Rumrill (1909),	15,496.81
6,067.26 Edward Russell (1877),	6,059.94
6,015.37 Sales (1893),	6,005.97
11,893.60 Saltonstall (1739),	11,844.36
9,069.51 Leverett Saltonstall (1895), . .	9,032.31
7,253.15 Mary Saltonstall (1730),	7,243.27
3,300.13 Sever (1868),	3,282.13
11,811.12 Sewall (1696),	11,783.56
51,051.70 Shattuck (1854),	50,993.78
6,332.91 Slade (1877),	6,311.23
4,705.06 Dunlap Smith (1903),	4,700.00
4,764.14 Story (1864),	4,754.70
3,564.22 Stoughton (1701),	3,552.12
4,488.75 Swift (1899),	4,468.31
83,798.40 Thayer (1857),	84,150.32
4,577.31 Gorham Thomas (1865),	4,560.39
8,129.34 Toppan (1868),	8,104.50
27,009.68 Townsend (1861),	27,090.08
5,338.60 Walcott (1855),	5,352.16
11,274.24 Christopher M. Weld (1899), .	11,225.20
5,724.95 Jacob Wendell (1899),	5,705.03
\$9,501,333.70 . . . Amounts carried forward, . . .	\$977,470.45 \$8,806,128.46

Principal,
Aug. 1, 1909.

Principal, June 30, 1910.

\$9,501,333.70	.. Amounts brought forward. . . .	\$977,470.45	\$8,806,128.46
12,379.85	Whiting (1874),	12,435.05	
5,059.69	Josiah Dwight Whitney (1904),	5,000.00	
11,863.59	Mary L. Whitney (1903), . . .	11,838.15	
10,632.06	Willard (1907),	10,582.34	
.....	Augustus Woodbury Scholar- ship (1909),	2,076.40	
10,529.71	Charles Wyman (1905),	10,500.91	1,029.903 30

BENEFICIARY AND LOAN

54,251.13	Rebecca C. Ames (1903), . . .	\$54,349.09	
730.86	Nathaniel Appleton (1772), . .	735.10	
2,184.49	Frank Bolles Memorial (1894), .	2,261.85	
1,823.92	William Brattle (1717),	1,826.88	
85,488.86	Daniel A. Buckley (1905), . . .	90,098.19	
51,177.25	Walter Channing Cabot (1905),	51,724.33	
1,245.98	Thomas Danforth (1724), . . .	1,295.82	
5,469.84	Moses Day (1880),	5,473.64	
522.01	John Ellery (1738),	522.89	
1,349.69	Exhibitions (1796),	1,353.69	
.....	Fines Loan (balance),	1,920.00	
948.77	Thomas Fitch (1737),	951.73	
562.74	Ephraim Flynt (1723),	565.26	
195.68	Henry Flynt (1760),	203.52	
600.82	Freshman Loan (balance),	4,741.27	
.....	Freshman Loan, Gove Gift,	1,018.18	
585.00	Henry Gibbs (1722),	588.40	
3,875.27	John Glover (1653),	4,030.27	
18,412.85	Price Greenleaf Aid (balance), .	14,324.65	
304.10	Student Fund of the Harvard Engi- neering Society of New York (1908) (balance),	254.10	
11,467.21	Edwin A. W. Harlow (1905), .	11,838.89	
5,399.30	Robert Henry Harlow (1908),	5,615.26	
436.26	Edward Holyoke (1743), . . .	438.70	
2,821.09	Robert Keayne (1659),	2,823.93	
26,212.50	Bertram Kimball (1903), . . .	26,000.00	
2,511.94	Harry Milton Levy Loan (Col- lege) (balance),	2,272.42	
1,221.32	Mary Lindall (1812),	1,220.16	
5,988.87	Susan B. Lyman (1899),	5,988.87	
717.34	Susan B. Lyman Loans (College) (balance),	552.05	
274.04	Anne Mills (1725),	285.00	
10,959.51	Munroe (1880),	10,962.91	
2,227.35	Palfrey Exhibition (1821), . . .	2,236.43	
5,416.32	Dr. Andrew P. Peabody Memo- rial (1896),	5,467.96	

\$9,857,180.91 .. Amounts carried forward, . . . \$313,941.44 \$9,836,031.76

Principal, Aug. 1, 1909.		Principal, June 30, 1910.
\$9,857,180.91	. . Amounts brought forward, . .	\$313,941.44 \$9,836,031.76
6,795.53	Scholarship and Beneficiary Money	
	Returned (balance),	5,192.29
261.04	Joseph Sewall (1765),	271.48
16,088.13	Alexander Wheelock Thayer	
	(1899),	16,371.65
11,170.14	Quincy Tufts (1877),	11,171.94
352.42	Benjamin Wadsworth (1737), .	366.50
		347,315.30

PRIZE

.....	Jeremy Belknap,	\$50.00	
1,935.66	James Gordon Bennett (1893), .	1,933.10	
401.11	Philo Sherman Bennett (1905),	417.15	
10,200.00	Francis Boott (1904),	10,400.00	
32,281.66	Bowdoin Prizes for Dissertations		
	(1791),	32,226.39	
2,932.48	Boylston Prizes for Elocution (1817),	2,794.76	
5,712.01	Coolidge Debating (1899),	5,840.49	
50.00	Dante Prize (balance),	50.00	
2,717.21	Lloyd McKim Garrison Prize		
	and Medal (1904),	2,714.02	
8.24	Harvard Club of New Jersey Prizes		
	(balance),	8.24	
2,168.28	Edward Hopkins Gift for "De-		
	turs" (1718) (balance),	2,254.50	
1,050.78	George Arthur Knight (1909),	1,092.82	
.....	Patria Society Gift,	50.00	
1,171.47	Sales (1892),	1,173.31	
2,713.39	John O. Sargent (1889),	2,821.91	
7,000.00	George B. Sohler (1890),	7,250.00	
4,281.78	Charles Sumner (1874),	4,253.06	
4,077.69	Robert N. Toppan (1894),	3,940.81	
2,342.70	Philip Washburn (1899),	2,436.42	
117,407.48	David A. Wells (1901),	116,435.61	198,142.59

LIBRARY

808.94	Boott Income for Books (balance),	\$57.71	
2,156.07	Bowditch (1861),	2,104.56	
228.35	Bright (balance),	58.67	
1,058.95	William R. Castle (1907),	1,029.67	
814.45	Fund of the Class of 1851 (1899),	847.01	
802.02	" " " 1851 (C. F.		
	Dunbar's Gift) (1899),	834.10	
3,779.11	Book Fund of the Class of 1881		
	(1906),	3,598.18	
27,897.60	Edwin Conant (1892),	27,896.40	
25,954.30	Constantius (1886),	25,892.26	
\$10,153,799.90	. . Amounts carried forward, . . .	\$62,318.56	\$10,381,489.65

Principal, Aug. 1, 1909.		Principal, June 30, 1910.
\$10,153,799.90	. . . Amounts brought forward, . . .	\$62,318.56 \$10,381,489.65
5,276.79	Denny (1875),	5,287.48
5,544.20	Farrar (1871),	5,593.63
3,397.80	Haven (1844),	3,379.17
10,054.04	Hayes (1885),	10,009.26
5,366.81	Hayward (1864),	5,375.93
915.43	R. M. Hodges (balance),	1,259.35
2,339.57	Hollis (1774),	2,348.45
2,162.78	Homer (1871),	2,172.65
506.10	Jarvis (1885),	514.15
5,244.55	Lane (1863),	5,261.88
28,446.00	Lowell (1881),	28,394.55
59,888.91	Minot (1870),	60,028.47
9,139.81	Charles Eliot Norton (1905), .	8,954.92
7,114.30	Lucy Osgood (1873),	7,104.13
6,996.78	Mary Osgood (1860),	6,973.69
6,028.67	Francis Parkman Memorial	
	(1908),	5,982.32
25,345.99	George F. Parkman (for books)	
	(1909),	25,224.79
3,934.27	Sales (1892),	3,916.67
5,451.52	Salisbury (1858),	5,418.87
5,120.00	Stephen Salisbury (1907), . . .	5,120.00
20,536.60	Sever (1878),	20,534.96
3,965.49	Shapleigh (1801),	3,949.87
41.34	George B. Sohier Income for	
	Books (balance),	29.79
2,500.00	Strobel Memorial, Class of 1877	
	(1909),	2,512.71
1,989.68	Strobel Memorial, Siam (1909), .	1,942.59
10,541.83	Subscription for Library (1859), . .	10,501.24
37,425.69	Sumner (1875),	37,345.58
5,212.23	Kenneth Matheson Taylor	
	(1899),	5,159.35
11,981.81	Daniel Treadwell (1885),	11,925.34
5,093.85	Ichabod Tucker (1875),	5,176.47
422.62	Wales Income for Books (balance),	245.68
16,095.93	Walker (1875),	15,958.52
5,259.94	Ward (1858),	5,250.41
.....	Julian Palmer Welsh Memorial	
	(1910),	2,288.90
20,000.78	J. Huntington Wolcott (1891),	20,000.00
100,000.00	Eben Wright (1883),	100,000.00
4,016.18	Sundry Gifts for books (balances), .	7,297.17
.33	Sundry Gifts for service (balances), .	.33
75.22	Duplicate Money,	56.06
769.22	Fines,	887.78
.....	Gifts for Additional Service,	19.95 511,721.62
\$10,598,002.96	. . . Amounts carried forward,	\$10,893,211.27

Principal, Aug. 1, 1909.		Principal, June 30, 1910.
\$10,598,002.96	Amounts brought forward,	\$10,893,211.27

DIVINITY SCHOOL

71,427.02	New Endowment (1879),	\$71,427.02
17,000.00	Oliver Ames (1880),	17,000.00
525.00	Hannah C. Andrews (1836),	525.00
1,115.26	Daniel Austin (1880),	1,115.26
1,000.00	Adams Ayer (1869),	1,000.00
15,275.00	Joseph Baker (1876),	15,275.00
231.54	Beneficiary money returned (balance),	240.82
4,329.50	Rushton Dashwood Burr (1894),	4,296.17
37,583.74	Bussey Professorship (1862),	37,583.74
2,177.95	Joshua Clapp (1836),	2,177.95
5,000.00	Edwin Conant (1892),	5,000.00
25,544.37	Dexter Lectureship (1810),	25,544.37
55,703.14	Frothingham Professorship (1892),	56,203.14
1,050.00	Abraham W. Fuller (1847),	1,050.00
911.34	Lewis Gould (1852),	911.34
988.25	Louisa J. Hall (1893),	966.54
6,008.43	Hancock Professorship,	6,008.43

Composed of these Funds:—

Thomas Hancock (1765).

Stephen Sewall (1762).

78,100.81	Charles L. Hancock (1891),	143,100.81
5,000.00	Haven (1898),	5,000.00
1,050.00	Samuel Hoar (1857),	1,050.00
10,000.00	Henry P. Kidder (1881),	10,000.00
9,184.69	Henry Lienow (1841),	9,184.69
1,050.00	Caroline Merriam (1867),	1,050.00
16,015.81	Parkman Professorship (1814),	16,015.81
656.66	John W. Quinby (1888),	682.94
1,000.00	Abby Crocker Richmond (1881),	1,000.00
1,000.00	John L. Russell (1890),	1,000.00
10,000.00	William B. Spooner (1890),	10,000.00
40,000.00	Thomas Tileston of New York Endowment (1879),	40,000.00
5,250.00	Mary P. Townsend (1861),	5,250.00
2,100.00	Winthrop Ward (1862),	2,100.00
57,845.73	Winn Professorship (1877),	58,345.73
.....	Augustus Woodbury Bequest (1909),	1,038.20
		551,142.96

SCHOLARSHIP AND BENEFICIARY

2,635.60	Robert Charles Billings Prize (1904),	\$2,651.04
13,627.42	Abner W. Buttrick (1880),	13,597.50
5,862.36	Thomas Cary (1820),	5,846.84
2,951.87	George Chapman (1834),	2,934.95
\$11,107,204.45	Amounts carried forward,	\$25,030.33 \$11,444,354.23

Principal, Aug. 1, 1909.		Principal, June 30, 1910.
\$11,107,204.45	Amounts brought forward, . . .	\$25,030.33 \$11,444,354.23
4,707.86	Joshua Clapp (1839)	4,696.18
15,490.21	Jackson Foundation (1835), . . .	15,469.81
5,827.75	J. Henry Kendall (1863), . . .	5,910.87
3,642.72	Nancy Kendall (1846),	3,638.44
1,050.00	William Pomroy (1835),	1,050.00
		55,795.63

LAW SCHOOL

.....	Ames (1910),	\$10,090.92	
632.42	James Barr Ames Loan (1904),	657.70	
4,240.84	James Barr Ames Prize (1898).	4,410.48	
90,364.67	Bemis Professorship (1879), . . .	93,979.27	
2,130.40	Gift of James Munson Barnard and Augusta Barnard (balance),	2,173.00	
23,979.82	Bussey Professorship (1862), . .	23,979.82	
112,748.07	James C. Carter Professorship (1906),	111,257.99	
13,921.11	James Coolidge Carter Loan (1906),	13,052.95	
15,750.00	Dane Professorship (1829), . . .	15,750.00	
5,597.38	Samuel Phillips Prescott Fay , 1798, Fund and Scholarship (1907),	5,821.26	
3,812.03	George Fisher Scholarship (1906),	3,814.51	
465.66	Hughes Loan (1903), . . . . .	.90	
25,305.60	Langdell (1909),	26,167.84	
47,021.25	Law School Book (1882),	47,021.25	
100,000.00	Law School Library (1898), . . .	100,000.00	
2,590.94	Harry Milton Levy Loan (Law) (balance),	2,604.58	
8,340.81	Royall Professorship (1781), . . .	8,340.81	
1,728.15	Scholarship money returned (balance),	1,641.61	
.....	Joshua Montgomery Sears, Jr. , Memorial Gift,	1,500.00	
94,994.97	Weld Professorship (1882), . . .	94,994.97	567,259.86

LAWRENCE SCIENTIFIC SCHOOL

1,253.24	Edward Austin Loans repaid (bal.),	\$1,253.24	
30,686.85	John B. Barringer (1873), . . .	30,686.85	
30,943.64	George H. Emerson Scholarship (1903),	31,731.40	
5,957.64	George A. Gardner (1892), . .	6,011.18	
11,869.99	Hennen Jennings Scholarship (1898),	11,819.79	
61,536.43	Abbott Lawrence (1859), . . .	61,536.43	
50,375.00	James Lawrence (1865),	50,375.00	
3,422.74	Lawrence Scientific School Loans repaid (balance),	4,591.74	
\$11,887,592.64	Amounts carried forward, . .	\$198,005.63	\$12,067,409.72

Principal, Aug. 1, 1909.		Principal, June 30, 1910.
\$11,887,592.64	. . Amounts brought forward, . .	\$198,005.63 \$12,067,409.72
493.15	Susan B. Lyman Loan (L. S. S.)	
	(balance),	615.00
40,805.73	Professorship of Engineering (1847),	40,805.73
25,000.00	Arthur Rotch (1895),	25,000.00
32,430.00	Shaler Memorial (1907),	33,570.80
7,129.80	Stuart Wadsworth Wheeler	
	(1898),	7,160.00
		305,157.16

GRADUATE SCHOOL OF APPLIED SCIENCE

100.00	Henry Weidemann Locke Scholar-	
	ship. Gift (balance),	\$100.00
1,002,115.52	Gordon McKay Endowment (1909),	1,002,808.64
.....	E. D. Peters Scholarship (balance),	250.00
		1,003,158.64

GRADUATE SCHOOL OF BUSINESS ADMINISTRATION

75.00	Gift for books (balance), . . . . .	.....
.....	Gifts for Loans (balance),	\$650.00
200.00	Gifts for Prizes (balances),	200.00
		850.00

MUSEUM OF COMPARATIVE ZOÖLOGY

297,933.10	Agassiz Memorial (1875),	\$297,933.10
5,921.72	Virginia Barret Gibbs Scholar-	
	ship (1892),	5,908.60
50,000.00	Gray Fund for Zoölogical Museum	
	(1859),	50,000.00
108,652.71	Sturgis Hooper (1865),	108,511.23
7,740.66	Humboldt (1869),	7,740.66
5,000.00	Willard Peele Hunnewell	
	(1901),	5,000.00
117,469.34	Permanent (1859),	117,469.34
7,594.01	Teachers' and Pupils' (1875),	7,594.01
5,409.70	Maria Whitney (1907),	5,526.10
		605,683.04

GERMANIC MUSEUM

10,013.52	Germanic Museum (1909),	\$10,013.52
519.53	Germanic Museum Building (1908),	102,980.78
.....	Germanic Museum Endowment (1909),	51,220.23
169.64	Unrestricted Gift (balance), . . . . .	.....
26,335.00	Emperor William (1906),	26,335.00
		190,549.53
\$13,638,700.77	. . Amounts carried forward,	\$14,172,808.09

Principal,
Aug. 1, 1909.

Principal, June 30, 1910.

\$13,638,700.77 . .	Amounts brought forward,	\$14,172,808.09
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**PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY
AND ETHNOLOGY**

12,685.39	Hemenway Fellowship (1891), . .	\$12,642.79	
28,355.56	Peabody Building (1866), . . .	28,355.56	
47,335.10	Peabody Collection (1866), . . .	47,335.10	
47,577.57	Peabody Professor (1866), . . .	47,335.10	
30,165.08	Thaw Fellowship (1890),	30,352.47	
10,017.76	Henry C. Warren Exploration (1899),	10,000.00	
5,000.00	Susan Cornelia Warren (1902),	5,000.00	
5,995.13	Robert C. Winthrop Scholar- ship (1895),	6,064.93	
20,020.98	Huntington Frothingham Wol- cott (1891),	20,000.00	207,085.95

MEDICAL SCHOOL

4,950.12	Harvard Medical Alumni (1907),	\$5,650.16
1,250.00	Harvard Medical Alumni Gifts (balance),	1,250.00
10,363.78	Anonymous Fund in the Department of Theory and Practice (1906), .	10,363.78
11,755.42	Edward Austin (Bacteriological Laboratory) (1899),	11,303.10
30,271.54	Edward M. Barringer (1881),	30,271.54
100,000.00	Robert C. Billings (1900), . .	100,000.00
6,600.54	J. Ingersoll Bowditch (1889),	6,593.70
1,688.47	Boylston Fund for Medical Books (1800),	1,673.20
24,352.71	John B. & Buckminster Brown Endowment (1896),	24,826.83
50,959.43	Bullard Professorship of Neuro- pathology (1906),	76,115.99
98,940.76	Caroline Brewer Croft (1899),	95,788.65
.....	Dr. John C. Cutter Bequest (1910),	13,650.53
385,548.77	Calvin and Lucy Ellis (1899),	386,265.36
214,095.26	George Fabyan Foundation for Comparative Pathology (1906), .	215,694.64
50,531.51	Charles F. Farrington (1909),	52,552.79
1,836.06	Samuel E. Fitz (1884),	1,836.08
4,785.26	F. B. Greenough (Surgical Re- search) (1901),	4,915.66
105,162.37	George Higginson Professorship (1902),	105,368.85
52,204.68	John Homans Memorial (1906),	52,239.80

\$15,001,150.04 . .	Amounts carried forward . .	\$1,196,360.66	\$14,379,894.04
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Principal, Aug. 1, 1909.		Principal, June 30, 1910.	
\$15,001.50.04	Amounts brought forward, . . .	\$1,196,360.66	\$14,379,894.04
69,192.65	Jackson Professorship of Clinical Medicine (1859),	69,192.65	
103,203.68	Henry Jackson Endowment (1903),	102,997.46	
179,955.42	Hamilton Kuhn Memorial (1908),	178,603.27	
52,373.63	Walter Augustus Lecompte Professorship of Otology (1907),	51,634.85	
3,599.40	Harriet Newell Lowell (1907),	1,572.16	
2,341.21	Medical Library (1872),	2,324.28	
53,415.64	William O. Moseley (1897), . .	53,052.28	
38,850.00	New Subscription (1888),	38,850.00	
10,020.18	Lyman Nichols (1907),	10,020.18	
.....	George F. Parkman (Medical) (1910),	8,581.40	
5,921.15	Gift for Pathological Laboratory, .	6,046.95	
.....	Repayment Pathological Laboratory,	500.00	
9,643.07	Henry L. Pierce (Residuary) (1898),	38,779.88	
56,755.38	Proctor (1903),	54,315.02	
1,000,000.00	John D. Rockefeller Gift (1902),	1,000,000.00	
9,335.94	Dr. Ruppenner (1897),	9,335.94	
6,172.39	School of Comparative Medicine (1899),	6,419.27	
35,310.73	Henry Francis Sears Fund for Pathology (1907),	35,322.04	
77,000.00	George C. Shattuck (1853), . .	77,000.00	
10,857.39	James Skillen Memorial Fund (1907),	10,857.39	
117,481.65	James Stillman Professorship (1902),	117,180.93	
5,355.16	Surgical Laboratory (1897),	6,779.01	
15,765.11	Mary W. Swett (1884),	15,765.11	
20,000.00	Samuel W. Swett (1884), . . .	20,000.00	
2,000.00	Quincy Tufts (1879),	2,000.00	
10,513.57	Warren Fund for Anatomical Mu- seum (1848),	10,734.13	
51,636.84	Edward Wigglesworth Pro- fessorship of Dermatology (1907),	51,762.32	
41,940.00	Charles Wilder (1900),	41,600.00	
45,244.62	Henry Willard Williams (1893),	47,054.42	
362.67	Gifts for Anatomical Research (bal.),	182.49	
3,688.60	Gift for Pathological Dep't (bal.),	2,580.01	
135.00	Aesculapian Club Gift,	121.20	
3.21	Anonymous Gift for Theory and Practice,	3.21	
91.91	W. H. Walker Gift,	84.61	
140.56	Gift, Bacteriological Laboratory, .	133.61	
\$17,039,456.80	Amounts carried forward, . . .	\$3,267,746.73	\$14,379,894.04

FUNDS AND GIFTS

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Principal,
Aug. 1, 1909.

Principal, June 30, 1910.

\$17,039,456.80	.. Amounts brought forward, ..	\$3,267,746.73	\$14,379,894.04
.....	Mary R. Bremer Gift for Department of Anatomy,	250.00	
212.42	William N. and Katherine E. Bullard Gift,	247.68	
300.00	Gift for Diabetes Mellitus,	210.00	
.....	Experiments on Animals,	50.00	
100.00	Gift for Folsom Memorial Tablet,		
.....	Loan Fund Medical Class of 1879, ..	308.03	
.....	Mass. Society for Promoting Agriculture,	727.91	
13.98	G. K. Sabine Gift,	13.98	
5.37	Sears Pathological Laboratory Publication Fund,	5.37	
947.69	Gifts for Department Neuropathology, ..	132.53	
16.05	Department of Physiology,	16.05	
17.72	W. L. Richardson Gift,		
.24	Anonymous Gift for Investigation of Smallpox, .....	.24	
6.18	Apparatus for Pathological Laboratory,		
1,964.94	Gift for X-Ray Apparatus,	1,914.21	3,271,622.73

FELLOWSHIP

8.32	Anonymous Gift for Teaching Fellowships in Histology and Embryology (balance),	\$8.32	
12,652.10	Charles Follen Folsom Memorial (1908),	13,259.82	
5,584.56	George Cheyne Shattuck Memorial (1891),	5,582.96	
6,008.06	Charles Eliot Ware Memorial (1891),	5,998.38	
5,527.43	John Ware Memorial (1891), ..	5,523.51	
.....	Henry P. Walcott (1910), ..	17,000.00	47,372.99

SCHOLARSHIP

.....	Aesculapian Club Scholarship,	\$150.00	
5,437.66	Lucius F. Billings (1900), ..	5,430.18	
6,340.79	James Jackson Cabot (1906), ..	6,319.43	
5,961.55	David Williams Cheever (1889), ..	5,950.03	
3,323.27	Cotting Gift (1900),	3,331.19	
3,032.45	Orlando W. Doe (1893),	3,053.73	
22.97	John Foster income for Medical Students (balance),		
5,839.49	Lewis and Harriet Hayden (1894), ..	5,848.05	
6,779.72	Claudius M. Jones (1893), ..	6,800.92	
5,741.50	Alfred Hosmer Linder (1895), ..	5,721.18	
9,108.34	Joseph Pearson Oliver (1904), ..	9,072.66	
\$17,124,409.60	.. Amounts carried forward, ..	\$51,677.37	\$17,698,889.76

Principal, Aug 1, 1909.		Principal, June 30, 1910.	
\$17,124,409.60	. . Amounts brought forward, . .	\$51,677.37	\$17,698,889.76
5,949.17	Charles B. Porter (1897), . . .	5,937.13	
5,371.28	Francis Skinner (1905),	5,366.54	
5,385.12	Charles Pratt Strong (1894), .	5,375.52	
6,815.75	Isaac Sweetser (1892),	6,838.39	
5,627.99	John Thomson Taylor (1899),	5,603.11	
5,766.81	Edward Wigglesworth (1897),	5,747.49	86,545.55
PRIZE			
4,386.04	Boylston (1803),	\$4,555.23	
9,063.13	William H. Thorndike (1895),	9,425.65	13,980.88
DENTAL SCHOOL			
3,765.85	Dental School Endowment (1880), .	8,765.85	
.....	Dental School Endowment of the Class of 1909 (1910),	10.00	
.....	Dental School Research Fund, . .	25.00	
5,181.33	Harvard Dental Alumni Endow- ment (1906),	5,713.33	
23,000.00	Henry C. Warren Endowment (1889),	23,000.00	
.....	Proctor Bequest (1910),	500.00	
.....	Gift for Surgical Instruments, . . .	24.16	
.....	Joseph Warren Smith Jr. Me- morial (1909),	10,225.00	
40.27	Gifts for X-Ray Apparatus,	40.27	48,303.61
OBSERVATORY			
33,252.37	Advancement of Astronomical Sci- ence (1901),	\$22,050.54	
20,000.00	Advancement of Astronomical Sci- ence (1902),	20,000.00	
5,000.00	Thomas G. Appleton (1884), .	5,000.00	
1,274.41	Bond Gifts (balance),	825.37	
2,500.00	J. Ingersoll Bowditch (1889), .	2,500.00	
200,000.00	Uriah A. Boyden (1887), . . .	200,000.00	
1,820.95	Draper Memorial (balance), . .	62.84	
2,000.00	Charlotte Harris (1877), . . .	2,000.00	
45,000.00	Haven (1898),	45,000.00	
21,000.00	James Hayward (1866), . . .	21,000.00	
50,000.00	Observatory Endowment (1882), .	50,000.00	
50,000.00	Paine Professorship (1886), . . .	50,000.00	
273,932.07	Robert Treat Paine (1886), . .	273,932.07	
110,293.88	Edward B. Phillips (1849), . .	110,293.88	
16,510.53	Josiah Quincy (1866),	17,170.97	
43,184.48	David Sears (1845),	44,048.16	
13,380.00	Augustus Story (1871),	13,380.00	
42.35	Gift for publishing lunar photographs,	42.35	877,306.18
\$18,093,953.38	. . Amounts carried forward,	\$18,725,025.98	

Principal,
Aug. 1, 1909.

Principal, June 30, 1910.

\$18,093,953.38	.. Amounts brought forward,	\$18,725,025.98
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BUSSEY INSTITUTION

20,658.86	Woodland Hill (1895),	\$20,658.86	20,658.86
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ARNOLD ARBORETUM

128,610.00	Arnold Arboretum (1899),	\$129,230.00	
162,061.30	James Arnold (1872),	162,385.42	
32,117.73	Arboretum Construction Gifts (balance),	33,329.08	
12,500.00	Robert Charles Billings (1904),	12,500.00	
22,250.72	William L. Bradley (1897), . .	20,000.00	
2,308.06	Bussey Fund for the Arnold Arboretum (1903),	2,308.06	
20,000.00	Francis Skinner (1906),	20,000.00	
.....	Sears Gift for Library,	4,247.92	
1,037.87	Gift for books (balance), . . . . .	.....
6,806.51	Gift for Expedition to China (balance),	1,889.23	385,389.71

PHILLIPS BROOKS HOUSE

10,506.66	Phillips Brooks House Endow- ment (1901),	\$10,506.66	
11,343.64	Ralph H. Shepard (1900), . . .	11,343.64	
5,973.51	Ralph Hamilton Shepard Me- morial (1898),	5,705.77	
6,498.82	John W. and Belinda L. Randall (1897),	6,758.78	34,314.85

WILLIAM HAYES FOGG ART MUSEUM

50,000.00	William Hayes Fogg (1892), .	\$50,000.00	
158.26	Gift for Special Exhibit (balance), .	.....
16,083.96	Gray Fund for Engravings (1858),	16,087.93	
17,670.37	William M. Prichard (1898), .	14,911.69	
36,733.35	John Witt Randall (1892), . . .	30,338.83	111,338.45

STILLMAN INFIRMARY

7,430.54	Stillman Infirmary Gift (balance),	\$7,727.78	
60,555.57	Robert Charles Billings, for Stillman Infirmary (1903), . .	60,555.57	
6,376.79	Free Bed Fund of the Class of 1868 (1898),	6,376.79	
653.26	Free Bed Fund for Stillman Infir- mary (1900),	653.26	
3,633.38	Herbert Schurz Memorial Free Bed (1903),	3,633.38	
3,204.16	Henry P. Walcott (1901), . . .	3,204.16	82,150.94

\$18,739,126.70	.. Amounts carried forward,	\$19,358,878.79
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Principal, Aug. 1, 1909.		Principal, June 30, 1910.
\$18,739,126.70	Amounts brought forward,	\$19,358,878.79

CLASS FUNDS

1,687.05	Fund of the Class of 1834 (1887),	\$1,755.78	
106.61	" " " 1842 (1908),	110.89	
9,784.98	" " " 1844 (1896),	10,184.51	
13,158.10	" " " 1846 (1905),	13,684.42	
3,725.00	" " " 1853 (1887),	3,720.35	
7,863.75	" " " 1856 (1904),	<u>7,800.00</u>	37,255.95

GIFTS FOR CONSTRUCTION

9,292.83	Arnold Arboretum Building Gifts,	\$10,526.34	
421.74	Brighton Marsh Fence (balance),	421.74	
503.59	Wolcott Gibbs Memorial (1909),	94,220.23	
.....	Gift for Gray Herbarium — Kidder		
	Wing,	537.99	
442.43	Semitic Building (balance),	442.43	
304,105.59	Amey Richmond Sheldon (1909),	316,269.83	
37.97	John Simpkins Hall (balance),	37.97	
340,775.66	George Smith Bequest (1904),	354,594.66	
11,516.71	Gift for a new University Library		
	Building (balance),	<u>11,977.39</u>	789,028.58

SUNDRY

482,510.15	Edward Austin (1899),	\$476,265.50	
50,000.00	Bright Legacy (1880),	50,000.00	
392,710.18	Bussey Trust (1861),	392,710.18	
165,562.53	Calvin and Lucy Ellis Aid (1899),	165,859.27	
3,171.50	John Foster (1840),	3,171.50	
794,942.67	Price Greenleaf (1887),	794,942.67	
29,939.33	Henry Harris (1883),	29,939.33	
1,678.72	Harvard Memorial Society (1898),	1,745.88	
60,819.57	Robert Troup Paine (1880),	62,434.95	
42,000.00	James Savage (1873),	42,000.00	
349,518.12	Frederick Sheldon (1909),	361,460.93	
150,000.00	Edward Wigglesworth Memo-		
	rial (1909),	150,000.00	
4,485.37	Gifts for Semitic Museum Collection		
	(balance),	5,158.15	
32,357.15	Gifts for Excavations in Palestine		
	(balance),	24,815.09	
107.00	Gifts for Chinese Students (balance),	.....
33.96	Gifts for Cuban Teachers (balance),	33.96	
87.36	Retiring Allowance, Gift of Carnegie		
	Foundation (balance),	<u>.....</u>	2,560,537.41

FUNDS IN TRUST FOR PURPOSES NOT
CONNECTED WITH THE COLLEGE

16,425.34	Daniel Williams (1716),	\$16,396.02	
4,797.99	Sarah Winslow (1790),	4,757.79	21,153.81
<u>\$22,023,695.65</u>			<u>\$22,766,854.54</u>

SCHEDULE 5

GENERAL SUSPENSE

CREDIT BALANCES

Aug. 1, 1909	June 30, 1910	June 30, 1910
\$3,588.35	Cryptogamic Herbarium,	\$4,129.68
1,122.25	Department of Forestry,	550.66
8,363.21	Gray Herbarium,	6,779.81
3,120.20	Jefferson Physical Laboratory,	3,135.47
674.79	School for Social Workers,	751.37
13,861.06	Divinity School,	16,094.50
31,660.82	Law School,	56,724.60
24,259.67	Museum of Comparative Zoölogy,	18,488.52
592.08	Germanic Museum,	564.64
9,297.26	Dental School, . . . . .	.....
24,779.24	Bussey Institution,	12,395.77
488.36	Fogg Art Museum,	16.18
.....	Graduate School of Business Administration,	9,026.04
.....	Botanical Museum,	65.92
.....	Botanic Garden,	2,246.16
<u>\$121,807.29</u>	Total — Exhibit A,	<u>\$130,969.32</u>

GENERAL SUSPENSE

DEBIT BALANCES

Aug. 1, 1909	June 30, 1910	June 30, 1910
	Advances from General Investments to :	
.....	Aid to Chinese Students,	\$2,393.00
.....	Aids, general,	3,662.50
\$1,223.03	Annals of Mathematics,	1,823.95
.....	Anonymous Fund,	250.00
3,714.97	Botanic Garden, . . . . .	.....
13,173.57	Uriah A. Boyden Fund,	14,625.90
2,777.87	Business School, . . . . .	.....
33,785.51	Bussey Trust (Real Estate),	32,785.51
.....	Carnegie Foundation Retiring Allowances, . . . . .	.03
.....	Francis James Child Memorial Fund,	108.94
1,774.21	Classical Department,	1,774.21
306.80	Classical Library Fund,	374.25
196.76	Classical Publication Fund of the Class of 1856,	384.59
.....	Warren H. Cudworth Scholarship,	540.00
225.00	Warren Delano Scholarship,	225.00
.....	Dental School,	1,672.67
27,181.23	Dental School Building,	95,521.07
1,855.75	Dining Hall Committee,	1,855.75
.....	Frank W. Draper Fund,	150.00
463.38	Estate No. 52 India St.,	688.19
818.63	“ 21 Wharf St.,	829.31
2.00	Freight on Books,	2.00
.....	John Foster income for Medical Students, . . . . .	.19
300.00	Harvard Club of Chicago Scholarship,	120.00
50.00	Harvard Club of San Francisco Scholarship, . . . . .	.....
100.20	Harvard Economic Studies, . . . . .	.....
.....	Sturgis Hooper Fund,	830.56
.....	Joseph Lovering Fund for Physical Research,	80.72
11,799.47	Medical School,	18,588.30
100.00	Menorah Society Prize, . . . . .	.....
1,050.42	Mining and Metallurgy,	1,050.42
44.52	Division of Music Gifts,	57.58
.....	New University Library Building,	350.00
.....	Old Boston Music Hall Estate,	4,500.00
643.91	Peabody Museum of American Archaeology and Ethnology,	974.27
.....	Charles Elliott Perkins Scholarship Fund,	272.76
95.94	Radcliffe College,	95.94
26,702.27	Randall Hall Association,	26,702.27
.....	Robert W. Sayles Fund,	7.04
6,057.72	Improvements and Additions to The Soldier's Field,	15,256.93
.....	Dunlap Smith Scholarship Fund,	94.74
1,398.64	Stillman Infirmary,	380.91
\$135,841.80	. . . Amounts carried forward,	\$229,029.50

Aug. 1, 1909		June 30, 1910
\$135,841.80	Amounts brought forward,	\$229,029.50
.....	Henry C. Warren Exploration Fund,	75.12
.....	Webb Estate,	1,900.00
.....	Huntington Frothingham Wolcott Fund,	150.16
4,900.90	Woodland Hill Fund,	5,518.34
	Library Funds:	
.....	Bowditch,	28.62
.....	Constantius,	13.55
369.18	Price Greenleaf,	80.15
.....	Lane,	55.85
.....	Lowell,	272.91
.....	Minot,	389.78
.....	Charles Eliot Norton,	139.24
.....	Henry L. Pierce,	329.11
.....	Sales,	40.50
.....	Shapleigh,	20.78
.....	Strobel Memorial (Siam),	24.26
54.21	Strobel Memorial (1877), . . . . .	.....
.....	Subscription for Library,	68.14
.....	Sumner,	279.24
.....	Daniel Treadwell,	43.46
.....	Ward,	9.21
.....	J. Huntington Wolcott,	115.30
9,412.50	Sundry Accounts of Treasurer's Office, . . . . .	.....
<u>\$150,578.59</u>	<u>Total — Exhibit A,</u>	<u>\$238,583.22</u>

UNIVERSITY

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of the following Funds:

Walter F. Baker,	\$551.20
Band Music,	45.72
John Barnard,	26.68
Andrew Bigelow,	198.00
Stanton Blake,	200.00
Charlotte F. Blanchard,	190.84
Samuel D. Bradford,	210.00
James C. Carter,	4,000.00
John W. Carter,	317.53
Class of 1883,	3,414.28
John Coggan,	60.00
Edward Erwin Coolidge (part),	76.44
Thomas Cotton,	6.20
John Cowdin,	1,353.40
George B. Dorr,	2,945.84
George Draper,	1,230.97
R. H. Eddy,	1,442.54
Harvard Ellis,	4,049.00
Richard W. Foster,	1,000.00
John Davis Williams French,	135.19
Gore,	822.84
John C. Gray,	635.06
Henry Harris ($\frac{1}{2}$ income),	598.78
Walter Hastings,	1,190.86
Henry L. Higginson,	2,777.98
Thomas Hollis,	20.80
Thomas Hubbard,	40.00
Nathaniel Hulton,	17.76
Thomas Hutchinson,	9.32
George Baxter Hyde,	200.00
Professorship of Hygiene (1899) (part),	1,000.00
Professorship of Hygiene (1902) (part),	200.00
Leonard Jarvis,	674.88
Henry P. Kidder,	400.00
Joseph Lee,	254.03
Theodore Lyman,	400.00
Israel Munson,	630.00
Henry S. Nourse (part),	2,180.32
Francis E. Parker,	2,891.24
George F. Parkman,	160.24
William Perkins,	1,200.00

Amount carried forward, \$37,757.94

UNIVERSITY (CONTINUED)

INCOME

Amount brought forward, \$37,757.94

President's,	2,548.60	
Ezekiel Rogers,	141.40	
Daniel Russell,	60.56	
John L. Russell,	934.80	
Amey Richmond Sheldon,	12,164.24	
Isaac Sweetser,	1,876.52	
Seth Turner,	200.00	
William F. Weld,	2,540.25	\$58,224.31
Care of the Sarah Winslow Fund,	\$4.80	
Sale of Inaugural Lunch tickets,	419.50	
Sale of catalogues, calendars, directories,	1,110.33	
Sale of waste paper,	16.91	
Use of houses by College officers,	1,408.34	
Use of land by Harvard Union,	6,011.12	8,971.00
		<u>\$67,195.31</u>

EXPENDITURE

Board of Overseers :

Salaries and wages,	\$205.85	
Printing Reports of President and Treasurer, . . .	2,099.07	
Printing,	143.05	
Stationery, postage, telephone and telegraph, . . .	118.61	
Auditing Treasurer's accounts,	150.00	
Sundries,	6.00	
University charge :		
Publication Office,	349.22	\$3,071.80

Corporation's Office :

Fuel, rent, etc.,	\$2,608.95	
Less 80% transferred to the Treasurer's Office, .	2,087.16	521.79

President's Office :

Salaries :

President,	\$6,000.00	
Secretary to the President,	583.34	
Secretary to the Corporation,	3,500.00	
Assistant Secretary to the Corporation,	750.00	
Services and wages,	1,590.76	
Equipment and supplies,	229.19	
Stationery, postage, telephone and telegraph, . .	776.30	
Sundries,	29.53	
	<u>\$13,459.12</u>	

Less 90% transferred to departments in proportion to the number of students,

12,113.21
\$1,345.91

Additional salary of President :

From President's Fund,	2,474.00	
From Thomas Cotton Fund,	7.51	3,827.42
Amount carried forward,		\$7,421.01

UNIVERSITY (CONTINUED)

EXPENDITURE

Amount brought forward,		\$7,421.01
Treasurer's Office :		
Salaries :		
Treasurer,	\$6,000.00	
Comptroller,	2,500.00	
Other salaries,	4,220.00	
Services and wages,	2,031.40	
Office supplies and expenses,	1,228.33	
Sundries,	692.87	
University charge :		
Corporation's Office,	\$2,087.16	
Publication Office,	42.29	2,129.45
		<u>\$18,802.05</u>
Less transferred :		
To University General Expense for		
the keeping of the Corporation's		
Records,	\$750.00	
To Departments in proportion to the		
income of their Funds,		
	16,833.54	17,583.54
The balance represents proportion on income of University		
Funds,		<u>1,218.51</u>
Bursar's Office :		
Salaries :		
Bursar,	\$4,500.00	
Assistant Bursar,	2,500.00	
Bursar's Assistant,	2,000.00	
Services and wages,	6,920.12	
Office supplies and expenses,	2,206.69	
Sundries,	890.98	
University charge :		
Publication Office,	166.94	
		<u>\$19,184.73</u>
Less transferred :		
To the College for letting College		
rooms,		
	\$800.00	
To Departments in proportion to the		
Bursar's collections and payments,		
	17,788.96	18,588.96
The balance represents proportion applicable to University		
collections and payments,		
		<u>595.77</u>
Publication Office :		
Salary :		
Publication Agent,	\$2,500.00	
Services and wages,	2,731.51	
Office supplies and expenses,	5,506.92	
Sundries,	340.74	
		<u>\$11,079.17</u>
Less charged directly to Departments,		
	4,404.36	
Balance transferred to Departments and to		
certain accounts with publications in propor-		
tion to the amounts charged for printing,		
	\$6,674.81	
Amount carried forward,		<u>\$9,235.29</u>

UNIVERSITY (CONTINUED)

EXPENDITURE

Amount brought forward, \$9,235.29

Inspector of Grounds and Buildings:

Salaries:

Inspector of Grounds and Buildings, \$4,000.00

Services and wages, 2,809.57

Office supplies and expenses, 580.16

Experiment on boiler at **Peabody** Museum, 250.00

University charge:

Publication Office, 2.47

Less transferred to Departments in proportion to

the floor area of buildings in the Inspector's

charge, 7,392.20

The balance represents the cost of the experiment, 250.00

Janitor's Office:

Services and wages, \$2,465.00

Office supplies and expenses, 84.20

University charge:

Publication Office, 1.10 2,550.30

Quinquennial Catalogue:

Services and wages, \$2,880.36

Office expenses, 173.10

University charge:

Publication Office, 12.45

\$3,065.91

Less sales, 31.70

Amount to be apportioned to departments, \$3,034.21

Less transferred to departments in proportion to

space occupied, 1,759.84

Amount paid by University:

General Funds, 42%, \$1,274.37

Amount paid by proceeds from sales, 31.70 1,306.07

Annual Catalogue:

Printing and supplies, \$4,182.50

University charge:

Publication Office, 603.87

\$4,786.37

Less sales, 592.78

Amount to be apportioned to departments, \$4,193.59

Less transferred to departments in proportion to

space occupied, 3,522.62

Amount paid by University:

General Funds, 16%, \$670.97

Amount paid by proceeds from sales, 592.78 1,263.75

General Expenses:

Inauguration, \$9,093.60

University charge:

Publication Office, 110.97 \$9,204.57

Amounts carried forward, \$9,204.57 \$14,605.41

UNIVERSITY (CONTINUED)

EXPENDITURE

Amounts brought forward,	\$9,204.57	\$14,605.41
General Expenses (<i>continued</i>):		
University Gazette,	\$1,585.53	
University charge:		
Publication Office,	242.81	1,828.34
Commencement Day,	\$391.57	
University charge:		
Publication Office,	31.40	422.97
Pamphlet on College Taxation,	\$105.09	
University charge:		
Publication Office,	2.01	107.10
Sundries,	\$509.91	
University charge:		
Publication Office,	26.07	535.98
Professional services,		4,500.00
Expenses of Professor at Berlin,		1,200.00
Keeping of the Corporation's Records, Treasurer's		
Office,		750.00
"1915" Boston Exposition,		321.42
Preservation of Pictures,		250.81
Taxes on real estate in Lucas Street,		116.74
		19,237.93
Alumni List and Directory:		
Services and wages,	\$2,936.66	
Office supplies and expenses,	1,729.28	
Printing,	437.79	
University charge:		
Publication Office,	153.63	
		\$5,257.36
Less transferred to College,	5,071.36	
Amount paid from proceeds of sales,		186.00
Labor in maintenance of grounds,	\$10,702.12	
Less transferred to Cambridge Departments,	8,561.70	2,140.42
Watchmen:		
In Yard,	\$1,625.00	
Outside Yard,	1,278.93	
Transferred to Departments in proportion to		
floor area of buildings,	\$2,903.93	
Regent's Office:		
Salary of Regent,	\$1,200.00	
Office supplies and expenses,	102.25	
Transferred to Cambridge Departments in pro-		
portion to the number of students,	\$1,302.25	
Amount carried forward,		\$36,169.76

UNIVERSITY (CONTINUED)

EXPENDITURE

Amount brought forward, \$36,169.76

Medical Adviser's Office :

Salary Medical Adviser :

From Professorship of Hygiene (1899)

Fund, \$1,000.00

From Professorship of Hygiene (1902)

Fund, 200.00

From General Funds, 2,300.00 \$3,500.00

Services and wages, 538.00

Office supplies and expenses, 116.40

Sundries, 47.95

\$4,202.35

Less amount paid from General Funds, transferred; \$750 to the Stillman Infirmary and the remainder to Cambridge Departments in proportion to the number of students,

3,002.35

1,200.00

Memorial Hall and Sanders Theatre :

Repairs and equipment, \$353.70

Caretaking, 673.53

\$1,027.23

Less 90% transferred to College, 924.51

102.72

Repairs and equipment, general,

1,723.70

Taxes, Harvard Union,

5,355.00

Secretary for Appointments' Office :

Salary of Secretary, \$3,000.00

Salary of Assistant Secretary, 583.34

Services and wages, 2,493.77

Office supplies and expenses, 719.45

Sundries, 52.00

University charge :

Publication Office, 39.60

Transferred to College, \$6,888.16

Payments made from University income for the following accounts :

Museum of Comparative Zoölogy Sch. 22 \$994.45

Peabody Museum of American Archaeology and

Ethnology Sch. 23 1,567.27

Semitic Museum Sch. 24 1,325.74

Germanic Museum Sch. 25 66.24

William Hayes Fogg Art Museum . . Sch. 26 263.29

Appleton Chapel Sch. 27 2,103.22

Phillips Brooks House Sch. 28 136.47

\$51,007.86

General Surplus, made up as follows :

Restricted Income unused, added to Funds and Gifts, \$14,494.29

Surplus, carried to Schedule 10, 1,693.16

16,187.45

\$67,195.31

NOTE : Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

COLLEGE

(Including the Graduate School of Arts and Sciences and the Graduate School of Applied Science)

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of Funds for Instruction and Gifts for Salaries.

Alford Professorship,	\$1,109.96
Edward Austin (part).	
Austin Teaching Fellowships,	9,950.40
John B. Barringer,	1,227.48
Boylston Professorship,	1,133.48
Martin Brimmer,	2,000.00
Class of 1880,	4,146.76
Class Subscription,	6,025.52
Eaton Professorship,	4,362.84
Eliot Professorship,	864.76
Eliot " (Jon. Phillips' Gift), . .	175.00
Calvin and Lucy Ellis Aid (part),	3,626.14
Erving Professorship,	140.00
Fisher " 	1,439.64
Henry Flynt,	17.40
Fund for Permanent Tutors,	649.60
Gospel Church ($\frac{1}{2}$ income used),	299.12
Gurney (part),	7,503.88
Hersey Professorship ($\frac{3}{8}$ income),	485.20
Hersey Professorship (Thomas Lee's gift), .	869.76
Hollis " (Divinity),	1,380.72
Hollis " (Mathematics),	149.88
Abbott Lawrence,	2,461.44
James Lawrence,	2,015.00
Henry Lee Professorship,	4,401.72
Thomas Lee, for Reading,	631.88
Arthur T. Lyman,	2,333.32
McLean Professorship,	1,722.52
Francis Greenwood Peabody (part), . .	3,300.00
Daniel H. Peirce,	581.88
Perkins Professorship,	840.00
Plummer Foundation,	1,000.80
Pope Professorship,	2,100.00
Professorship of Engineering,	1,632.24
Nelson Robinson Jr. (part),	16,380.05
" " " Additional (part), . .	909.36
Eliza O. and Mary P. Ropes,	4,701.88
Arthur Rotch,	1,000.00
Rumford Professorship,	2,254.76
Amount carried forward,	\$95,824.39

COLLEGE (CONTINUED)

INCOME

Amount brought forward, \$95,824.39

Income of Funds for Instruction and Gifts for Salaries

(continued).

Gurdon Saltonstall ,	2,400.00	
Smith Professorship,	925.60	
Josiah Stickney ,	471.68	
Teachers' Endowment:		
Interest,	\$79,907.32	
Gift,	200.00	80,107.32
Unknown Memorial (part),	2,244.08	
Henry Villard ,	1,270.13	
Henry W. Wales :		
Wales Professorship,	1,250.21	
Henry C. Warren (part),	4,249.79	
Sylvester Waterhouse ,	297.72	
David A. Wells (part),	4,500.00	
Jerome Wheelock ,	3.04	
Gifts for salaries,	4,200.00	\$197,743.96

Income of Funds for General Purposes.

John W. P. Abbot (accumulating),	\$498.28	
William H. Baldwin, Jr.	80.00	
John A. Blanchard ,	42.00	
Twenty-fifth Anniversary Fund of the		
Class of 1881 ,	4,482.96	
Fund of the Class of 1882 ,	3,175.28	
Class of 1884 ,	3,302.00	
Edward W. Codman ,	12,991.27	
Jonathan Phillips ,	1,260.00	
William M. Spackman ,	100.00	
Gifts for General Purposes,	165.50	26,097.29

Income of Fellowship Funds and Gifts for Fellowships.

Julia Amory Appleton ,	\$804.68	
Edward Austin (part).		
Edward Austin Fellowships,	2,000.00	
Cercle Français de l'Université Harvard (gift),	600.00	
George W. Dillaway ,	224.24	
Ozias Goodwin Memorial,	475.84	
Harris ,	452.40	
Edward William Hooper ,	1,034.52	
John Thornton Kirkland ,	458.08	
Henry Lee Memorial,	492.16	
Charles Eliot Norton ,	450.00	
Robert Treat Paine ,	542.72	
John Parker ,	2,461.72	

Amounts carried forward, \$9,996.36 \$223,841.25

COLLEGE (CONTINUED)

INCOME

Amounts brought forward, \$9,996.36 \$223,841.25

Income of Fellowship Funds and Gifts for Fellowships
(continued).

Francis Parkman,	419.20	
Princeton Fellowship,	200.00	
Nelson Robinson Jr. (part).		
Nelson Robinson Jr. Fellowship,	1,000.00	
Rogers,	1,329.96	
Henry Bromfield Rogers Memorial, . . .	505.08	
Frederick Sheldon (part),	1,800.00	
South End House (gift),	100.00	
Fellowship Department of Social Ethics (gift), .	1,000.00	
John Tyndall,	490.28	
James Walker,	461.12	
Whiting,	1,002.20	
Adams Woods (gift),	400.00	18,704.20

Income of Scholarship Funds and Gifts for Scholarships.

Abbot,	\$158.96	
Alford (accumulating),	105.28	
Edward Austin (part).		
Austin Scholarships in Architecture, . . .	600.00	
" " for Teachers,	3,750.00	
Bartlett,	218.36	
Bassett,	230.12	
Bigelow,	559.84	
Charles Sumner Bird (gift),	200.00	
Borden (accumulating),	131.48	
Bowditch,	4,677.32	
W. G. Bowdoin (gift),	250.00	
Bright Scholarships:		
Interest on balance,	\$188.20	
Bright Legacy ($\frac{1}{2}$ income),	1,000.00	1,188.20
Browne,	162.28	
Morey Willard Buckminster,	229.60	
Burr,	1,433.80	
Ruluff Sterling Choate,	251.00	
George Newhall Clark,	385.48	
Class of 1802,	352.04	
" 1814,	135.68	
" 1815 (Kirkland),	279.52	
" 1817,	194.44	
" 1828,	149.00	
" 1835,	213.92	

Amounts carried forward, \$15,856.32 \$242,545.45

COLLEGE (CONTINUED)

INCOME

Amounts brought forward, \$15,856.32 \$242,545.45

Income of Scholarship Funds and Gifts for Scholarships

(continued).

Class of 1841,	217.52
“ 1852 (Dana),	217.48
“ 1856,	669.44
“ 1867,	203.32
“ 1877,	215.44
“ 1883,	255.12

Crowninshield, 511.88

Francis H. Cummings, 263.48

George and Martha Derby, 227.16

Julius Dexter, 257.48

Orlando W. Doe, 121.12

William Samuel Eliot, 224.16

George H. Emerson, 1,237.76

Joseph Eveleth, 1,131.56

Fall River, 102.56

Farrar, 265.28

George Fisher and Elizabeth Huntington

Fisher, 199.96

Richard Augustine Gambrill, 483.64

Charles Haven Goodwin, 324.00

Benjamin D. Greene, 184.92

Price Greenleaf (part) :

Price Greenleaf Scholarships, 3,000.00

Harvard Club of Boston (gift), 1,000.00

“ “ Buffalo “ 200.00

“ “ Chicago “ 480.00

“ “ Cleveland “ 400.00

“ “ Fitchburg “ 158.50

“ “ Hawaii “ 150.00

“ “ Indiana “ 200.00

“ “ Lowell “ 300.00

“ “ Lynn “ 33.33

“ “ New Jersey “ 250.00

“ “ San Francisco (gift), 500.00

“ “ Seattle “ 300.00

“ “ Washington, D. C. (gift), 139.64

“ “ Worcester (gift), 100.00

John Appleton Haven, 428.84

William Hilton (part), 563.84

Ebenezer Rockwood Hoar, 456.00

Levina Hoar, for the town of Lincoln, 267.16

Priscilla Clark Hodges, 168.16

Amounts carried forward, \$32,265.07 \$242,545.45

COLLEGE (CONTINUED)

INCOME

Amounts brought forward, \$32,265.07 \$242,545.45

Income of Scholarship Funds and Gifts for Scholarships
(continued).

R. M. Hodges (part):

Hodges Scholarship,	247.80
Hollis,	265.84
Huidekoper (gift),	200.00
Henry B. Humphrey,	452.96
Hennen Jennings,	474.80
Charles L. Jones,	1,299.20
Henry Weidemann Locke (gift),	100.00
George Emerson Lowell,	441.76
Markoe,	231.60

Matthews Scholarships:

Interest on balance,	\$176.20	
Matthews Hall, $\frac{1}{2}$ net rents,	4,418.93	4,595.13
William Merrick,	263.92	
Morey,	350.32	
Lady Mowlson,	246.20	
Boston Newsboys',	118.96	
Howard Gardner Nichols,	240.12	
Lucy Osgood,	254.04	
George Foster Peabody,	325.96	
James Mills Peirce,	169.08	
Pennoyer,	301.64	
Charles Eliot Perkins,	927.24	
Rebecca A. Perkins,	188.32	

Philadelphia:

Interest,	\$472.56	
Gift,	200.00	672.56
E. D. Peters (gift),	250.00	
Wendell Phillips Memorial,	69.16	
William Reed,	83.86	
Ricardo Prize (gift),	350.00	
Rodger,	59.12	
Henry Bromfield Rogers,	146.04	
Nathaniel Ropes Jr.,	431.28	
James A. Rumrill,	602.00	
Edward Russell,	242.68	
Sales,	240.60	
Saltonstall,	475.76	
Leverett Saltonstall,	362.80	
Mary Saltonstall,	290.12	

James Savage (part):

Savage Scholarship,	300.00
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Amounts carried forward, \$48,535.94 \$242,545.45

COLLEGE (CONTINUED)

INCOME

Amounts brought forward, . . . \$48,535.94 \$242,545.45

Income of Scholarship Funds and Gifts for Scholarships

(continued).

Sever,	132.00	
Sewall,	472.44	
Shattuck,	2,042.08	
Slade,	253.32	
Dunlap Smith,	100.20	
Story,	190.56	
Stoughton:		
Interest,	\$17.60	
Use of pasture,	120 30	137.90
Swift,	179.56	
Thayer,	3,351.92	
Gorham Thomas,	183.08	
Toppan,	325.16	
Townsend,	1,080.40	
Walcott,	213.56	
Christopher M. Weld,	450.96	
Jacob Wendell:		
Interest,	\$230.08	
Gift,	50.00	280.08
Whiting,	495.20	
Josiah Dwight Whitney,	202.40	
Mary L. Whitney,	474.56	
Willard,	425.28	
Augustus Woodbury,	76.40	
Charles Wyman,	421.20	60,024.20

Income of Beneficiary and Loan Funds and Repayments.

Rebecca C. Ames:

Interest,	\$2,170.04	
Loans repaid,	22.92	\$2,192.96
Nathaniel Appleton,		29.24

Edward Austin:

Loans repaid by special students,	289.95	
Frank Bolles Memorial,	87.36	
William Brattle,	72.96	
Daniel A. Buckley,	7,309.33	
Walter Channing Cabot,	2,047.08	
Edward Erwin Coolidge (part),	470.00	
Thomas Danforth,	49.84	
Moses Day,	218.80	
Calvin and Lucy Ellis Aid (part),	2,308.74	
John Ellery,	20.88	

Amounts carried forward, \$15,097.14 \$302,569.65

COLLEGE (CONTINUED)

INCOME

Amounts brought forward, . . . \$15,097.14 \$302,569.65

Income of Beneficiary and Loan Funds and Repayments

(continued).

Exhibitions, 54.00

Fines Loan Fund :

For late registration, \$860.00

For delayed payment of dues, . . . 1,120.00 1,980.00

Thomas Fitch, 37.96

Ephraim Flynt, 22.52

Henry Flynt, 7.84

Freshman Loan :

Gifts, \$6,246.00

Interest, 200.28 6,446.28

Freshman Loan :

Gove Gift, \$1,000.00

Interest, 18.18 1,018.18

Henry Gibbs, 23.40

John Glover, 155.00

Price Greenleaf (part), \$12,509.45

Price Greenleaf Aid :

Interest, 736.52

Price Greenleaf Aids returned, . . . 139.83 13,385.80

Edwin A. W. Harlow :

Interest, \$458.68

Loans repaid, 55.00 513.68

Robert Henry Harlow, 215.96

Edward Holyoke, 17.44

Robert Keayne, 112.84

Bertram Kimball, 1,000.00

Lawrence Scientific School Loans Repaid :

Interest on balance, \$136.92

Loans repaid, 1,192.08 1,329.00

Harry Milton Levy Loan, 100.48

Mary Lindall, 48.84

The Loan, 7,100.00

Susan B. Lyman :

Interest, \$239.56

Loans repaid, 42.00 281.56

Anne Mills, 10.96

Munroe, 438.40

Palfrey Exhibition, 89.08

Dr. Andrew P. Peabody Memorial, 216.64

Scholarship and Beneficiary Money Returned :

Gifts, \$100.00

Loans repaid, 645.40

Interest, 317.36 1,062.76

Amounts carried forward, \$50,765.76 \$302,569.65

COLLEGE (CONTINUED)

INCOME

Amounts brought forward, \$50,765.76 \$302,569.65

Income of Beneficiary and Loan Funds and Repayments

(continued).

Joseph Sewall,	10.44	
Alexander W. Thayer (part),	283.52	
Quincy Tufts,	446.80	
Benjamin Wadsworth,	14.08	
Stuart Wadsworth Wheeler,	285.20	51,805.80

Income of Prize Funds, and gifts for prizes :

Jeremy Belknap (gift),	\$50.00	
James Gordon Bennett,	77.44	
Philo Sherman Bennett,	16.04	
Francis Boott (part),	90.00	
Bowdoin Prizes for Dissertations,	1,291.28	
Boylston Prizes for Elocution,	117.28	
Coolidge Debating,	228.48	
Lloyd McKim Garrison,	108.68	
Harvard Menorah Society (gift),	100.00	
Edward Hopkins Gift for "Deturs" :		
Interest on balance,	\$86.72	
From Trustees,	230.65	317.37
George Arthur Knight,	42.04	
Patria Society (prize, gift),	50.00	
Susan Anthony Potter Prizes (gift),	225.00	
Sales,	46.84	
John O. Sargent,	108.52	
George B. Sohier (part),	250.00	
Charles Sumner,	171.28	
Robert N. Toppan,	163.12	
Philip Washburn,	93.72	3,547.09

Income of Sundry Funds for Special Purposes :

Anonymous for Field Work in Geology :

Gift,	\$350.00	
Interest,	301.24	\$651.24

Botanic Department (part) :

¼ for Cryptogamic Herbarium,	\$397.80	
¼ for Laboratories of Botany,	198.90	596.70
William H. Baldwin, Jr., 1885,	231.52	
Francis Boott (part),	350.36	

Francis James Child Memorial :

Interest,	\$451.04	
Sales,	10.00	461.04

Classical Publication Fund of the Class of 1856 :

Interest,	\$284.20	
Sales,	140.90	425.10

Book Fund of the Class of 1881,	151.16	
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Amounts carried forward, \$2,867.12 \$357,922.54

COLLEGE (CONTINUED)

INCOME

Amounts brought forward, \$2,867.12 \$357,922.54

Income of Sundry Funds for Special Purposes

(continued).

Class of 1883 Special,	10.20
Cryptogamic Herbarium,	143.53
George A. Gardner,	238.32
George Silsbee and Ellen Sever Hale, .	247.16
Harvard Oriental Series,	612.56
Joseph Lovering for Physical Research, .	316.16
Woodbury Lowery Memorial,	40.72
Gordon McKay Endowment,	35,138.15
Music Department,	50.08
Francis Greenwood Peabody (part), . .	751.52
Nelson Robinson Jr. (part),	4,219.95
Robert W. Sayles,	222.24
George William Sawin:	

Interest, \$211.72

Part repayment of deposit, 8.25 219.97

Shaler Memorial, 1,297.20

Elizabeth Torrey, 47.20

Henry Warren Torrey:

Interest, \$518.40

Sales, 120.97 639.37

Unknown Memorial (part), 1,800.00

Samuel Ward, 678.40

Cyrus M. Warren, 259.92

Henry C. Warren (part), 500.17

David A. Wells (part), 196.28

Chauncey Wright, 52.08

Jefferson Physical Laboratory:

Interest on balance, 124.80

Physical Laboratory Endowment (interest), . . . 3,000.00

T. Jefferson Coolidge for Research in Physics:

Interest, \$1,110.55

Gift, Bache Fund, 500.00 1,610.55 55,283.65

Sundry Gifts, Fees, etc., for Special Purposes.

For the Department of Forestry:

Gift for Marsh House, \$846.36

For the Department of Classics:

Sales of publications, \$163.41

Receipts from copyrights, 9.34 172.75

For Additional Instruction in Municipal Govern-

ment, 5,000.00

Amounts carried forward, \$6,019.11 \$413,206.19

COLLEGE (CONTINUED)

INCOME

Amounts brought forward, \$6,019.11 \$413,206.19

Sundry Gifts, Fees, etc., for Special Purposes

(continued).

For the Department of Forestry :

Fees and Lodging at Forestry House,	\$218.50	
Use of Telephone,	17.90	
Sales lumber, wood, loam, and fruit,	1,701.23	
Interest on balance,	44.88	1,982.51

For Department of Ethics

Social Questions :

Gift,	\$2,500.00	
Interest,	43.74	2,543.74

For Department of Geology

Exhibition Case for Photographs :

Gifts,	300.00	
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For the Division of Music,	275.00	
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For the Department of Sanskrit :

Interest,	\$36.21	
Sale of publication,	271.79	308.00

For the School for Social Workers :

Gift,	\$500.00	
Interest,	26.96	
Fees,	570.00	1,096.96

For Department of Classics : Lectures,	1,000.00	
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For Department of Mining and Metallurgy.

Summer School Mining Camp :

Balance of 1908-09 expense		
money returned,	\$321.93	
Interest,	17.81	339.74

For Department of Economics :

(Maps and Chart — A. T. Lyman) . . .	50.00	
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For Department of Zoölogy.

Bermuda Biological Station :

Gift,	\$500.00	
Interest,	17.49	517.49

For the Department of Philosophy for the Study

of the Vision of Animals,	170.00	
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For the Lecture Room Classical Library,	1,250.00	
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For the International Committee on Teaching of Mathematics (gift),	200.00	
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For furnishing rooms, Department of Ethics of
the Social Questions :

Interest,	15.92	
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Amounts carried forward,	\$16,068.47	\$413,206.19
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COLLEGE (CONTINUED)

INCOME

Amounts brought forward,	\$16,068.47	\$413,206.19
Sundry Funds, Gifts, Fees, etc., for Special Purposes (continued).		
For Department of History (History 1):		
Sales of publications,	\$489.80	
Interest,	<u>19.32</u>	509.12
For Nelson Robinson Jr.		
Special Expense:		
Sale of Manual of Northern Woodsmen,	1,083.55	
For Plantation of Shrubs, interest,	73.11	
Harvard Economics Studies Fund:		
Sales of publications,	195.92	
For Equipment, Robinson Hall:		
Interest,	<u>273.06</u>	18,203.23
Receipts from students.		
Tuition Fees — Regular Programme:		
College Regular,	\$293,155.00	
“ Special,	15,981.00	
Lawrence Scientific School,	2,135.00	
Unclassified,	<u>15,590.00</u>	\$326,861.00
Tuition Fees — Additional Courses:		
College Regular,	\$32,436.74	
“ Special,	1,396.00	
Lawrence Scientific School,	50.00	
Special Instruction, English “A,”	180.00	
Unclassified,	<u>530.00</u>	34,592.74
Tuition — Regular Programme:		
Graduate School of Arts and Sciences,	\$49,693.00	
Graduate School of Applied Science,	12,930.00	
Radcliffe students in University courses,	1,665.00	
For afternoon and Saturday courses for teachers,	15.00	
Summer Schools in Cambridge,	<u>322.50</u>	64,625.50
Registration Fees:		
Summer Schools in Cambridge,		28.00
Auditors’ Fees:		
Summer Schools in Cambridge,		10.00
Examination fees:		
Admission,	\$10,377.00	
Condition, make-up and advanced standing,	2,754.00	
Doctor of Philosophy,	<u>60.00</u>	13,191.00
Amounts carried forward,	\$439,308.24	\$431,409.42

COLLEGE (CONTINUED)

INCOME

Amounts brought forward, \$439,308.24 \$431,409.42

Receipts from Students (*continued*).

Graduation fees, 9,680.00

Laboratory fees:

Astronomy,	\$505.00	
Botany,	1,300.00	
Chemistry,	12,414.25	
Engineering,	2,360.99	
Forestry,	70.00	
Geology,	1,050.00	
Mineralogy,	435.00	
Mining and Metallurgy,	2,845.85	
Hygiene,	1,265.00	
Physics,	4,064.50	
Psychology,	125.00	
Zoölogy,	1,464.50	27,900.09

College Dormitories: Hollis, Stoughton, Holworthy, Thayer, Weld,

Wadsworth House, Walter Hastings,

Perkins, and Conant, \$70,705.39

Matthews Hall, 12,714.66

\$83,420.05

Less $\frac{1}{2}$ net income from Matthews Hall,
credited under income of Matthews

Scholarship, 4,418.93 79,001.12

Summer School excursions, 104.98

Amount collected on account of unpaid term-bills

previously charged off, 65.98 556,060.41

Sundries:

Sale of University Hymn Book, \$709.73

“ Address List, 35.00

“ Manual American History, 508.06

“ Propositions in Geometry, 137.78

“ Infinite Series, 100.67

“ Elementary Exercises in Physics, 143.82

“ old examination papers, 380.42

“ Harvard Psychological Review, 16.37

“ other publications, 661.23

Sundry receipts at the Engineering Camp at Squam

Lake, 17,545.60

Sale of Commencement Lunch tickets, 409.50

Board from students at Mining Camp, 570.00

Sale of Historical Monographs, 2.43

Amounts carried forward, \$21,220.61 \$987,469.83

COLLEGE (CONTINUED)

INCOME

Amounts brought forward,	\$21,220.61	\$987,469.83
Sundries (<i>continued</i>).		
Use of typewriters,	2.18	
Sale of grass,	10.00	
Proctor's services H. A. A.,	139.24	21,372.03
		<u>\$1,008,841.86</u>
General Deficit, made up as follows :		
Advances to Funds and Gifts carried to General		
Suspense,	\$987.73	
Deficit, carried to Schedule 10,	99,048.30	
	<u>\$100,036.03</u>	
Less Restricted Income unused, carried to		
Funds and Gifts,	\$19,618.62	
General Suspense,	61.59	19,680.21
		<u>80,355.82</u>
		<u>\$1,089,197.68</u>

NOTE. — Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

EXPENDITURE

From Fellowship Funds and Gifts.

Edward Austin,	\$2,000.00	
Cercle Français de l'Université Harvard, . . .	600.00	
George W. Dillaway,	225.00	
Ozias Goodwin Memorial,	525.00	
Harris,	500.00	
Edward William Hooper,	575.00	
John Thornton Kirkland,	500.00	
Henry Lee Memorial,	525.00	
Charles Eliot Norton,	400.00	
Robert Treat Paine,	600.00	
John Parker,	1,875.00	
Francis Parkman,	450.00	
Nelson Robinson Jr.,	1,000.00	
Rogers,	1,125.00	
Henry Bromfield Rogers Memorial, . . .	525.00	
Frederick Sheldon (part),	1,800.00	
Fellowship, Department Social Ethics,	500.00	
South End House,	250.00	
John Tyndall,	525.00	
James Walker,	250.00	
Whiting,	900.00	
Adams Woods Fellowship,	400.00	\$16,050.00
Amount carried forward,		<u>\$16,050.00</u>

COLLEGE (CONTINUED)

EXPENDITURE

Amount brought forward, \$16,050.00

From Scholarship Funds and Gifts.

Abbot,	\$175.00
Edward Austin Scholarships in Architecture,	600.00
Edward Austin Scholarships for Teachers,	3,750.00
Bartlett,	250.00
Bassett,	270.00
Bigelow,	700.00
Bowditch,	5,205.00
W. G. Bowdoin, Jr., Scholarship,	250.00
Bright,	1,150.00
Browne,	175.00
Morey Willard Buckminster,	330.00
Burr,	1,600.00
Ruluff Sterling Choate,	225.00
George Newhall Clark,	500.00
Class of 1802,	375.00
“ 1814,	150.00
“ 1815 (Kirkland),	300.00
“ 1817,	200.00
“ 1828,	300.00
“ 1835,	225.00
“ 1841,	225.00
“ 1852 (Dana),	225.00
“ 1856,	600.00
“ 1867,	225.00
“ 1877,	225.00
“ 1883,	275.00
Crowninshield,	470.00
Warren H. Cudworth,	600.00
Francis H. Cummings,	275.00
George and Martha Derby,	250.00
Julius Dexter,	225.00
Orlando W. Doe,	100.00
William Samuel Eliot,	250.00
George H. Emerson,	450.00
Joseph Eveleth (part),	1,200.00
Fall River,	100.00
Farrar,	275.00
George Fisher and Elizabeth Huntington Fisher,	200.00
Richard Augustine Gambrill,	525.00
Charles Haven Goodwin,	350.00
Benjamin D. Greene,	200.00
Price Greenleaf (part),	3,000.00

Amounts carried forward, \$26,975.00 \$16,050.00

COLLEGE (CONTINUED)

EXPENDITURE

Amounts brought forward, . . .		\$26,975.00	\$16,050.00
From Scholarship Funds and Gifts (<i>continued</i>).			
Harvard Club of Buffalo,		200.00	
“ “ Chicago,		300.00	
“ “ Cleveland,		400.00	
“ “ Fitchburg,		158.50	
“ “ Hawaii,		150.00	
“ “ Indiana,		200.00	
“ “ Lowell,		300.00	
“ “ Lynn,		33.33	
“ “ New Jersey,		250.00	
“ “ San Francisco,		400.00	
“ “ Seattle,		300.00	
“ “ Washington,		250.00	
“ “ Worcester,		100.00	
John Appleton Haven,		475.00	
William Hilton (part),		450.00	
Ebenezer Rockwood Hoar,		500.00	
Levina Hoar, for the town of Lincoln,		300.00	
Priscilla Clark Hodges,		175.00	
R. M. Hodges (part),		275.00	
Hollis,		275.00	
Huidekoper Scholarship,		200.00	
Henry B. Humphrey,		500.00	
Hennen Jennings,		525.00	
Charles L. Jones,		1,370.00	
Henry Weidemann Locke (gift),		100.00	
George Emerson Lowell,		450.00	
Markoe,		250.00	
Matthews,		5,280.00	
William Merrick,		275.00	
Morey,		312.50	
Lady Mowlson,		250.00	
Boston Newsboys',		150.00	
Howard Gardner Nichols,		250.00	
Lucy Osgood,		275.00	
George Foster Peabody,		250.00	
Pennoyer,		75.00	
C. E. Perkins Scholarship,		1,200.00	
Philadelphia,		1,200.00	
William Reed,		175.00	
Ricardo Prize Gift,		350.00	
Henry Bromfield Rogers,		150.00	
James A. Rumrill,		155.00	
Edward Russell,		250.00	
Amounts carried forward,		\$46,459.33	\$16,050.00

COLLEGE (CONTINUED)

EXPENDITURE

Amounts brought forward, \$46,459.33 \$16,050.00

From Scholarship Funds and Gifts (*continued*).

Sales,	250.00	
Saltonstall,	525.00	
Leverett Saltonstall,	400.00	
Mary Saltonstall,	300.00	
James Savage (part),	300.00	
Sever,	150.00	
Sewall,	500.00	
Shattuck,	2,100.00	
Slade,	275.00	
Dunlap Smith,	200.00	
Story,	200.00	
Stoughton,	150.00	
Swift,	200.00	
Thayer,	3,000.00	
Gorham Thomas,	200.00	
Toppan,	350.00	
Townsend,	1,000.00	
Walcott,	200.00	
Christopher M. Weld,	500.00	
Jacob Wendell,	300.00	
Whiting,	440.00	
Josiah Dwight Whitney,	262.09	
Mary L. Whitney,	500.00	
Willard,	475.00	
Charles Wyman,	450.00	59,686.42

From Beneficiary and Loan Funds.

Rebecca C. Ames,	\$2,095.00
Nathaniel Appleton,	25.00
Edward Austin Loan (Special Students), . .	1,045.00
Frank Bolles Memorial,	10.00
William Brattle,	70.00
Daniel A. Buckley,	2,700.00
Walter Channing Cabot,	1,500.00
Edward Erwin Coolidge (part),	470.00
Moses Day,	215.00
Calvin and Lucy Ellis Aid (part),	2,012.00
John Ellery,	20.00
Exhibitions,	50.00
Fines, Loan Fund,	60.00
Thomas Fitch,	35.00
Ephraim Flynt,	20.00
Freshman Loan,	2,305.83
Henry Gibbs,	20.00

Amounts carried forward, \$12,652.83 \$75,736.42

COLLEGE (CONTINUED)

EXPENDITURE

Amounts brought forward, \$12,652.83 \$75,736.42

From Beneficiary and Loan Funds (*continued*).

Price Greenleaf Aid,	17,474.00	
Edwin A. W. Harlow,	142.00	
Student Fund of the Harvard Engineering Society of New York,	50.00	
Edward Holyoke,	15.00	
Robert Keayne,	110.00	
Bertram Kimball,	1,212.50	
Lawrence Scientific School Loans Repaid, . .	160.00	
Harry Milton Levy Loan,	340.00	
Mary Lindall,	50.00	
The Loan,	7,100.00	
Susan B. Lyman,	325.00	
Munroe,	435.00	
Palfrey Exhibition,	80.00	
Dr. Andrew P. Peabody Memorial,	165.00	
Scholarship and Beneficiary Money Returned, . .	2,666.00	
Quincy Tufts,	445.00	
Stuart Wadsworth Wheeler,	255.00	43,677.33

From Prize Funds and Gifts for Prizes.

James Gordon Bennett,	\$80.00	
Francis Boott (part),	90.00	
Bowdoin Prizes for Dissertations,	1,346.55	
Boylston Prizes for Elocution,	255.00	
Coolidge Debating,	100.00	
Lloyd McKim Garrison,	111.87	
Edward Hopkins Gift for "Deturs," . . .	231.15	
Susan Anthony Potter Prizes,	225.00	
Sales,	45.00	
Charles Sumner,	200.00	
Robert N. Toppan,	300.00	
David A. Wells Prize,	1,168.15	4,152.72

For University Scholarships.

Undergraduate :

Normal,	\$540.00	
Lawrence Scientific School,	300.00	
Graduate School of Arts and Sciences,	5,340.00	
Graduate School of Applied Science :		
Architectural League,	150.00	
General,	1,530.00	7,860.00

From Sundry Funds and Balances for Special Purposes.

Francis Boott, books for the Department of Music,	\$901.59	
Francis James Child Memorial, books, . .	621.72	

Amounts carried forward, \$1,523.31 \$131,426.47

COLLEGE (CONTINUED)

EXPENDITURE

Amounts brought forward, \$1,523.31 \$131,426.47

From Sundry Funds and Balances for Special Purposes

(continued).

Classical Publication Fund of the **Class of 1856**:

Harvard Studies in Classical Philology, 612.93

T. Jefferson Coolidge for Research in Physics, 1,984.02

Book Fund of the **Class of 1881**, books for the
Department of Chemistry, 332.09

George A. Gardner, for photographs, etc., for
the Department of Geology, 184.78

Harvard Oriental Series, publications, 637.02

Harvard Psychological Review, printing, 10.35

Joseph Lovering for Physical Research, 580.57

Gordon McKay Endowment (travelling ex-
penses), 643.37

Gordon McKay, Department of

Engineering, \$34,494.78

Less paid for salaries, 15,994.78 18,500.00

Francis G. Peabody, 1,445.88

Nelson Robinson Jr. (part).

Expense of Nelson Robinson Jr.

Hall, \$4,005.06

University charge, Inspector of

Grounds and Buildings:

Salary and expenses, 119.26

Watchmen, 95.63 4,219.95

Nelson Robinson Jr. Additional (part).

Psychological Laboratory, \$1,343.27

Books, 257.33

Animal Psychology, 200.00

Expenses, 21.24 1,821.84

Robert W. Sayles for Department of Geology, 785.51

Shaler Memorial, 156.40

Henry Warren Torrey, publications, 46.95

Unknown Memorial (part), services and expenses, 1,543.58

Cyrus M. Warren, research in Chemistry, 293.74

Henry C. Warren, publications, 35.84

Summer Course in Geology, 150.00

Jefferson Physical Laboratory:

Services and wages, \$819.33

Office supplies and expenses, 357.49

Operating expense, \$2,110.45

Less paid from General

Income, 600.00 1,510.45

Amounts carried forward, \$2,687.27 \$35,508.13 \$131,426.47

COLLEGE (CONTINUED)

EXPENDITURE

Amounts brought forward,	\$2,687.27	\$35,508.13	\$131,426.47
From Sundry Funds and Balances for Special Purposes (<i>continued</i>).			
University charge :			
Treasurer's Office, care of investments,	81.23		
Bursar's Office, collections and payments,	31.03		
Publication Office, salary and expenses,	1.90		
Inspector of Grounds and Buildings, salary and expenses,	230.31		
Watchmen,	77.79	3,109.53	38,617.66
From Gifts and Fees, etc., for Special Purposes.			
For Lecture Room, Classical Library,	\$1,250.00		
For Department of French, books for Library,	2.41		
For Department of French and other Romance Languages, Lowell Memorial Library, books,	9.85		
For Department of Economics :			
Arthur T. Lyman , maps and chart,	50.04		
For the Department of Philosophy :			
Philosophical Library Books,	53.14		
Study of the Vision of Animals,	170.00		
For the Department of Ethics Social Questions :			
Salaries for instruction,	\$1,100.00		
Expenses,	400.00	1,500.00	
Furnishings for the Department of Social Ethics,	164.00		
School for Social Workers,	1,020.38		
For Division of Music,	288.06		
For Department of Physics, Physical Research,	68.90		
Department of Forestry, Nelson Robinson Jr.			
Special Expense Gift,	1,282.54		
Department of Forestry, J. S. Ames Gift,	136.92		
" " Marsh House,	831.36		
" Botany, John S. Ames Gift,	405.50		
" Zoölogy, Bermuda Biological Station,	237.87		
Department of Geology, Exhibition Case for Photographs,	216.00		
Department of Classics, Classical Antiquities,	6.23		
Department of Classics, Lectures (G. M. Lane),	1,000.00		
Semitic Library, books,	209.91		
Rooms for Visiting German Professor,	24.29		
Department of Geography and Geology for Models,	10.00		
Department of Classics, books,	240.20		
Amounts carried forward,	\$9,177.60	\$170,044.13	

COLLEGE (CONTINUED)

EXPENDITURE

Amounts brought forward,	\$9,177.60	\$170,044.13
From Gifts and Fees, etc., for Special Purposes (continued).		
Department of History (History 1),	135.69	
For Department of Architecture, Equipment, . .	634.37	
For Department of Forestry:		
Fees and Appropriations,	\$527.07	
Operations,	1,793.36	
House Account,	233.67	2,554.10
		12,501.76
Administration Offices.		
Dean of the Faculty of Arts and Sciences:		
Salary,	\$500.00	
Services and wages,	793.86	
Office supplies and expenses,	198.83	
Sundries,	33.02	1,525.71
Dean of Harvard College:		
Salaries,	\$9,500.00	
Services and wages,	6,446.27	
Office supplies and expenses,	1,026.66	
Sundries,	489.91	17,462.84
Dean and Secretary of the Graduate School of Arts and Sciences:		
Salaries,	\$2,500.00	
Services and wages,	558.00	
Office supplies and expenses,	2,803.75	
Sundries, . . . . .	.70	5,862.45
Dean of the Graduate School of Applied Science:		
Salary,	\$2,000.00	
Services and wages,	886.37	
Office supplies and expenses,	285.84	
Sundries,	5.75	3,177.96
Dean of the Graduate School of Business Administration:		
Salary,		2,000.00
Secretary of the Faculty of Arts and Sciences:		
Salaries,	\$3,400.00	
Services and wages,	1,092.30	
Office supplies and expenses,	735.52	
Sundries,	25.00	5,252.82
From Appropriations, Fees, etc.		
Anthropology,	\$146.41	
Architecture,	524.82	
Landscape Architecture,	1,448.46	
Astronomy,	546.12	
Botany,	\$3,817.52	
Assistance,	555.00	4,372.52
Amounts carried forward,	\$7,038.33	\$217,827.67

COLLEGE (CONTINUED)

EXPENDITURE

Amounts brought forward,	\$7,038.33	\$217,827.67
From Appropriations, Fees, etc. (<i>continued</i>).		
Chemistry,	13,721.37	
Classics,	200.00	
Classical Philology, . . . . .	.58	
Economics,	\$1,067.22	
Office expenses,	182.88	1,250.10
Education,	118.68	
Engineering,	5,159.27	
Engineering, Harvard Engineering Camp, . .	18,421.81	
English,	231.06	
Fine Arts,	484.71	
French and other Romance Languages,	1,491.18	
Geology,	1,058.06	
German,	991.54	
History,	1,190.80	
Mathematics,	669.49	
Mining and Metallurgy,	4,425.29	
Mineralogy and Petrography,	759.74	
Music,	246.44	
Physics,	6,260.64	
Physiology,	1,367.91	
Psychology,	180.35	
Zoölogy,	1,031.00	66,298.35
For College Public Buildings, which are not valued in the Treasurer's books.		
Repairs and Equipment,	\$10,790.18	
Caretaking and Operating Expenses,	24,037.96	34,828.14
For College Dormitories, Hollis, Stoughton, Hol- worthy, Thayer, Weld, Wadsworth House, Walter Hastings, Perkins, and Conant, which are not valued in the Treasurer's books; and for Matthews Hall.		
Repairs and Equipment,	\$6,478.21	
Caretaking and Operating Expenses,	26,956.91	33,435.12
Summer School.		
Dean's Office :		
Salary of Dean,	\$1,000.00	
Services and wages,	809.60	
Office supplies and expenses,	2,420.33	
Sundries,	5.00	\$4,234.93
Salaries,	22,702.00	
Services and wages,	384.31	
Office supplies and expenses,	269.90	
Amounts carried forward,	\$27,591.14	\$352,389.28

COLLEGE (CONTINUED)

EXPENDITURE

Amounts brought forward, \$27,591.14 \$352,389.28

Summer School (*continued*).

Receptions,	382.40		
Extra Janitor service,	152.50		
Adjustment of Fees 1908-09,	740.00		
Remission of Tuition Fees,	37.00		
Sundries,	71.20		
School of Physical Education,	615.85		
University charge:			
Bursar's Office, collections and pay-			
ments,	\$213.26		
Publication Office, salaries and ex-			
penses,	309.91		
Annual Catalogue,	214.47	737.64	30,327.73

General.

Salaries for Instruction:

Edward Austin (part).

Austin Teaching Fellowships, \$15,440.00

From Sundry Funds and Gifts, . 197,939.72

From General Income, 365,333.19 \$578,712.91

Services and wages,	8,402.34		
Proctors,	2,412.69		
Office supplies and expenses,	147.33		
Blue-books,	425.14		
Repairs and improvements,	890.46		
Pension for Bell-Ringer,	572.92		
Diplomas,	507.17		
Rooms for Visiting German Professor,	408.67		
Instruction in Andover Theological Seminary, . .	300.81		
Adjustment of charge for heat, Museum of Com-			
parative Zoölogy, 1908-09,	1,921.25		
Office Expenses, Lawrence Hall,	968.27		
Sundries,	472.62	596,142.58	

Printing Office.

Services and wages,	\$16,060.53		
Supplies and equipment,	22,808.70		
Printing,	756.84		
Repairs,	221.37		
Water, heat, light, and protection,	205.46		
Binding,	3,405.03		
Cleaning office,	77.00		
Sundries, freight, etc.,	234.58		

Less the following items:

Distribution of Printing to Sun-
dry Departments, \$27,752.50

Work done for parties outside

University, 802.00 28,554.50 15,215.01

Amount carried forward, \$994,074.60

COLLEGE (CONTINUED)

EXPENDITURE

Amount brought forward, \$994,074.60

General (*continued*).

Admission Examinations.

Cambridge :

Services and wages,	\$3,691.56
Reading books,	1,297.50
Office supplies and expenses,	919.67
Blue-books,	470.08
Sundries,	466.93

University charge :

Publication Office,	130.99	6,976.73
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Travelling expenses for Representatives of the

University,	570.05
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Advertising, Graduate School of Arts and Sciences,	69.00
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Payments made from College Income for the following accounts :

Jefferson Physical Laboratory, Schedule 8,	\$600.00	
Museum of Comparative Zoölogy, " 22,	3,896.25	
Peabody Museum of American Archaeology and Ethnology, Schedule 23,	174.14	
William Hayes Fogg Art Museum, Schedule 26,	2,369.60	
Appleton Chapel, Schedule 27,	8,412.86	
Phillips Brooks House , Schedule 28,	931.15	
Hemenway Gymnasium, " 29,	7,550.94	23,934.94

University charge.

President's Office, salaries and expenses,	\$8,358.12
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Treasurer's Office, care of investments,	8,592.79
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Bursar's Office :

Collections and payments,	\$9,946.98
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Letting College rooms,	800.00	10,746.98
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Secretary for Appointments, salaries and expenses	6,888.16
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Medical Adviser, salary and expenses,	1,707.51
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Inspector of Grounds and Buildings, salary and expenses,	3,948.66
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Publication Office, salary and expenses,	2,934.58
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40 % Quinquennial Catalogue,	1,213.68
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56 % Annual Catalogue,	2,848.41
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90 % Memorial Hall and Sanders Theatre, expenses for the building,	924.51
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Watchmen,	2,082.84
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Labor, etc.,	7,767.52
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Regent's Office, salary and expenses,	987.24
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Alumni Office,	5,071.36	63,572.36
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\$1,089,197.68

SCHEDULE 9

LIBRARY

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of Book Funds and Gifts and Receipts for the purchase of books.

Nathaniel I. Bowditch,	\$86.24
Bright Legacy ($\frac{1}{2}$ income), \$1,000.00	
“ Balance (interest), 9.12	1,009.12
William R. Castle,	32.32
Edwin Conant ($\frac{1}{4}$ income),	278.98
Constantius ($\frac{1}{2}$ income),	519.08
Denny,	211.08
Eliza Farrar,	221.76
Price Greenleaf (part),	1,000.00
Horace A. Haven,	135.92
Francis B. Hayes,	402.16
George Hayward,	214.68
Thomas Hollis,	93.60
Sidney Homer,	86.52
Jarvis,	20.24
Frederick A. Lane,	209.80
Lowell,	1,137.84
Charles Minot,	2,395.56
Charles Eliot Norton,	365.60
Lucy Osgood,	284.56
Mary Osgood,	279.88
Francis Parkman Memorial,	261.16
George F. Parkman,	1,013.84
Henry L. Pierce,	2,010.72
Francis Sales,	157.36
Stephen Salisbury,	218.08
Sever,	821.44
Samuel Shapleigh,	158.60
George B. Sohier (part),	31.64
Strobel Memorial (Class of 1877),	103.12
Strobel Memorial (Siam),	76.44
Subscription,	421.68
Charles Sumner,	1,497.04
Kenneth Matheson Taylor,	208.48
Daniel Treadwell ($\frac{1}{2}$ income),	239.64
Ichabod Tucker,	210.01
James Walker,	643.84

Amount carried forward, \$17,058.03

LIBRARY (CONTINUED)

INCOME

Amount brought forward,	\$17,058.03	
Income of Book Funds and Gifts and Receipts for the purchase of books (<i>continued</i>).		
Thomas W. Ward ,	210.40	
J. Huntington Wolcott ,	800.04	
Gifts for books. Gifts,	\$11,248.38	
Interest,	105.31	11,353.69
Sale of duplicate books,	80.64	
Received for books lost,	92.66	\$29,595.46
Income of R. M. Hodges Fund (part).		
For publishing bibliographical contributions,		343.92
Income of Funds for general purposes.		
Daniel Austin ,	\$312.28	
Edwin Conant ($\frac{3}{4}$ income)	836.94	
Constantius ($\frac{1}{2}$ income),	519.08	
Fund of the Class of 1851 ,	32.56	
" " " " (C. F. Dunbar's Gift),	32.08	
Price Greenleaf (part),	11,509.44	
Henry T. Morgan ,	3,278.04	
Henry L. Pierce , Residuary (part),	2,304.54	
Stephen Salisbury Bequest,	204.80	
James Savage (part),	1,035.00	
Daniel Treadwell ($\frac{1}{2}$ income),	239.64	
Eben Wright ,	4,000.00	24,304.40
Fees for use of Library,	\$100.00	
Fines,	421.00	
Gifts for additional service,	650.00	
Gifts for general use,	175.00	
Sales of Bibliographical Contributions,	2.61	
Sales of Sundry publications,	10.40	1,359.01
		<u>\$55,602.79</u>
General Deficit, made up as follows:		
Advances to Funds, carried to General Suspense,	\$1,486.71	
Deficit carried to Schedule 10,	32,077.56	
	\$33,564.27	
Less Restricted Income unused, added to Funds and Gifts,	2,393.83	31,170.44
		<u>\$86,773.23</u>

NOTE. — Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

LIBRARY (CONTINUED)

EXPENDITURE

For Books, from the following Funds, Gifts, etc.

Bowditch,	\$166.37	
Bright,	1,178.80	
Castle,	61.60	
Edwin Conant,	280.18	
Constantius,	594.67	
Denny,	200.39	
Farrar,	172.33	
Price Greenleaf (part),	710.97	
Haven,	154.55	
Hayes,	446.94	
Hayward,	205.56	
Hollis,	84.72	
Homer,	76.65	
Jarvis,	12.19	
Lane,	248.32	
Lowell,	1,462.20	
Minot,	2,645.78	
Charles Eliot Norton,	689.73	
Lucy Osgood,	294.73	
Mary Osgood,	302.97	
Francis Parkman Memorial,	307.51	
George F. Parkman,	1,135.04	
Henry L. Pierce,	2,608.03	
Sales,	215.46	
Salisbury,	250.73	
Sever,	823.08	
Shapleigh,	195.00	
George B. Sohier (part),	43.19	
Strobel Memorial (1877),	114.66	
“ “ (Siam),	69.33	
Subscription,	530.41	
Sumner,	1,856.39	
Kenneth Matheson Taylor,	261.36	
Daniel Treadwell,	339.57	
Tucker,	127.39	
Wales,	176.94	
Walker,	781.25	
Ward,	229.14	
J. Huntington Wolcott,	916.12	
From Sundry gifts for books (balances),	8,072.70	
Duplicate money and receipts for lost books,	192.46	
Fines,	302.44	\$29,537.85
Amount carried forward,		\$29,537.85

LIBRARY (CONTINUED)

EXPENDITURE

Amount brought forward,		\$29,537.85
General.		
Salaries,	\$20,900.00	
Services and wages (part),	18,234.57	
Equipment and supplies,	1,511.08	
Stationery, postage, telephone and telegraph,	808.84	
Printing,	1,378.99	
Binding,	3,740.12	
Freight, express, etc.,	222.97	
Moving and cleaning books,	101.50	
Laundry,	38.50	
Sundries,	64.24	
Department Libraries, services,	1,513.28	
Repairs and equipment, land and building,	1,940.35	
Caretaking, land and building,	3,911.70	54,366.14
From Gifts.		
Additional service in main library,		630.05
University charge :		
Treasurer's Office, care of investments,	\$1,110.20	
Bursar's Office, collections and payments,	539.32	
Inspector of Grounds and Buildings, salary and expenses,	185.07	
Publication Office, salaries and expenses,	235.23	
Annual Catalogue,	20.97	
Watchmen,	148.40	2,239.19
		<u>\$86,773.23</u>

SCHEDULE 10

UNIVERSITY, COLLEGE, AND LIBRARY
COMBINED ACCOUNTS

For the year ended June 30, 1910

Deficit in College, Schedule 8,	\$99,048.30	
Less balances of appropriations unused,	7,234.52	\$91,813.78
Deficit in Library, Schedule 9,		32,077.56
		<u>\$123,891.34</u>
Surplus in University, Schedule 7,		1,693.16
Deficit met by the unrestricted principal of the following Funds :		
Walter F. Baker,	\$13,779.68	
Richard W. Foster,	4,081.43	
Henry T. Morgan,	81,950.54	
Henry S. Nourse,	11,862.16	
Henry L. Pierce (Residuary),	10,524.37	
		<u>\$122,198.16</u>

NOTE. — Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

GRADUATE SCHOOL OF BUSINESS ADMINISTRATION

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Graduate School of Business Administration Balance (interest),			\$131.88
Gifts for immediate use.			
Under the guarantee,	\$24,275.00		
Other Gifts:			
For general use,	\$650.00		
For loans,	850.00	1,500.00	25,775.00
Receipts from students.			
Tuition fees (1908-09),	\$5,725.00		
" " (1909-10),	8,820.00	\$14,545.00	
Graduation fees,		160.00	
Sale of reports in "Business 25" (1908-09)		350.00	15,055.00
Balances of appropriations returned,			344.22
			<u>\$41,306.10</u>

EXPENDITURE

From Gifts for Loans,			\$200.00
Dean's Office.			
Salary,	\$500.00		
Services and wages,	842.00		
Expenses,	501.90	1,843.90	
General.			
Salaries,	\$18,450.00		
Services and wages,	137.58		
Outside lectures,	3,881.20		
Advertising,	960.55		
Books,	1,417.73		
Hospitality and travelling expenses,	253.70		
Freight and express,	50.97		
Sundries,	24.98	25,176.71	
Scholarships from unrestricted income,		750.00	
			<u>\$27,970.61</u>
University charge:			
President's Office, salaries and expenses,	\$242.26		
Bursar's Office, collections and payments,	273.28		
Medical Adviser, salary and expenses,	47.75		
Publication Office, salary and expenses,	41.99		
Annual Catalogue,	83.87		
Regent's Office, salary and expenses,	27.61	716.76	
Amount carried forward,			<u>\$28,687.37</u>

GRADUATE SCHOOL OF BUSINESS (CONTINUED)

EXPENDITURE

Amount brought forward,		\$28,687.37	
University charge (<i>continued</i>):			
Phillips Brooks House, Schedule 28,	\$26.04		
Hemenway Gymnasium, Schedule 29,	213.78	239.82	
			\$28,927.19
General Surplus, reserved as follows:			
Restricted Income unused, added to Funds and Gifts,	\$575.00		
Reserve, carried to General Suspense, for use after			
the expiration of the guarantee,	11,803.91	12,378.91	
			\$41,306.10

NOTE. — Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

SCHEDULE 12

DIVINITY SCHOOL

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of Funds for Instruction or for general purposes.

Divinity School balance (interest),	\$554.44	
Endowment,	2,857.08	
Oliver Ames ,	680.00	
Hannah C. Andrews ,	21.00	
Daniel Austin ,	44.60	
Adams Ayer ,	40.00	
Joseph Baker ,	611.00	
Beneficiary money returned (balance),	9.28	
Bussey Professorship,	1,503.36	
Bussey Trust (part),	4,975.47	
Joshua Clapp ,	87.12	
Edwin Conant ,	200.00	
Dexter Lectureship,	1,021.76	
Frothingham Professorship,	2,228.12	
Abraham W. Fuller ,	42.00	
Lewis Gould ,	36.44	
John Hancock Professorship,	\$240.32	
Charles L. Hancock (part),	6,249.52	6,489.84
Haven ,		200.00
Samuel Hoar ,		42.00
Henry P. Kidder ,		400.00
Henry Lienow ,		367.40
Caroline Merriam ,		42.00
Amount carried forward,	\$22,452.91	

DIVINITY SCHOOL (CONTINUED)

INCOME

Amount brought forward, \$22,452.91

Income of Funds for Instruction or for general purposes

(continued).

John Newgate,	13.32	
Parkman Professorship,	640.64	
John W. Quinby,	26.28	
Abby Crocker Richmond,	40.00	
John L. Russell,	40.00	
William B. Spooner,	400.00	
Thomas Tileston of New York Endowment,	1,600.00	
Mary P. Townsend,	210.00	
Winthrop Ward,	84.00	
Winn Professorship,	2,313.84	
Augustus Woodbury Bequest,	38.20	\$27,859.19

Income of Scholarship, Beneficiary and Prize Funds.

Robert Charles Billings (prizes),	\$115.44	
Abner W. Buttrick,	545.08	
Thomas Cary,	234.48	
George Chapman,	108.08	
Joshua Clapp,	188.32	
Jackson Foundation,	619.60	
J. Henry Kendall,	233.12	
Nancy Kendall,	145.72	
William Pomroy,	42.00	2,231.84

Income of Book Funds.

Rushton Dashwood Burr,	\$173.20	
Louisa J. Hall,	39.52	212.72
		<u>\$30,303.75</u>

Receipts from Students.

Tuition fees, regular courses,	\$6,362.78	
Divinity Hall,	2,952.50	
Library fines,	1.50	9,316.78
		<u>\$39,620.53</u>

EXPENDITURE

From Scholarship Funds.

Thomas Cary,	\$250.00	
George Chapman,	125.00	
Joshua Clapp,	200.00	
Jackson Foundation,	640.00	
J. Henry Kendall,	150.00	
Nancy Kendall,	150.00	\$1,515.00

From Beneficiary Funds.

Abner W. Buttrick,	\$575.00	
William Pomroy,	45.00	620.00

From Robert Charles Billings Fund, prize, 100.00

Amount carried forward, \$2,235.00

DIVINITY SCHOOL (CONTINUED)

EXPENDITURE

Amount brought forward,		\$2,235.00	
From Book Funds.			
Rushton Dashwood Burr,	\$206.53		
Louisa J. Hall,	61.23		267.76
Dean's Office.			
Stationery, postage, telephone and telegraph, . . .	\$63.10		
Printing,	265.86		328.96
General.			
Salaries,	\$24,575.00		
Services and wages,	1,503.33		
Equipment and supplies,	7.21		
Stationery, postage, telephone and telegraph, . . .	33.30		
Books,	430.57		
Advertising,	176.19		
Andover Theological Seminary Instruction to Divinity School Students,	630.41		
American School for Oriental Study and Research in Palestine,	100.00		
Care of grounds,	111.50		
Sundries,	12.95		27,580.46
Divinity Library.			
Repairs and equipment, land and building,	\$139.93		
Caretaking, land and building,	1,012.62		1,152.55
Divinity Hall.			
Repairs and equipment, land and building,	\$464.17		
Caretaking, land and building,	1,797.49		2,261.66
University charge.			
President's Office, salaries and expenses,	\$121.13		
Treasurer's Office, care of investments,	637.24		
Bursar's Office, collections and payments,	195.23		
Medical Adviser, salary and expenses,	29.96		
Inspector of Grounds and Buildings, salary and expenses,	143.50		
Publication Office, salary and expenses,	50.51		
Quinquennial Catalogue,	60.69		
Annual Catalogue,	143.69		
Labor, etc.,	375.99		
Watchmen,	49.26		
Regent's Office, salary and expenses,	17.32		1,824.52
Semitic Museum, Schedule 24,	568.17		
Phillips Brooks House, Schedule 28,	16.34		
Hemenway Gymnasium, Schedule 29,	133.11		717.62
			\$36,368.53
General Surplus, made up as follows :			
Restricted Income unused, added to Funds and Gifts, .	\$1,018.56		
Surplus, carried to General Suspense,	2,233.44		3,252.00
			\$39,620.53

NOTE. — Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

LAW SCHOOL
INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of Funds and Gifts.

Law School balance (interest),	\$1,266.44		
Ames Fund,	90.92		
James Barr Ames Loan,	25.28		
James Barr Ames Prize,	169.64		
Gift of James Munson Barnard and Augusta Barnard (interest),	42.60		
Bemis Professorship,	3,614.60		
Bussey Professorship,	959.20		
Bussey Trust (part),	4,975.47		
James C. Carter Professorship,	4,509.92		
James Coolidge Carter Loan,	556.84		
Dane Professorship,	630.00		
Samuel Phillips Prescott Fay 1798 Fund and Scholarship,	223.88		
George Fisher Scholarship,	152.48		
Hughes Loan. Interest,	\$18.64		
Repayments,	<u>291.60</u>	310.24	
Langdell Scholarship,	1,012.24		
Law School Book,	1,880.84		
Law School Library,	4,000.00		
Harry Milton Levy Loan (interest),	103.64		
Royall Professorship,	333.64		
Weld "	3,799.80		
Scholarship Money Returned. Gift,	\$1,000.00		
Interest,	93.12		
Repayments,	<u>1,090.34</u>	2,183.46	30,841.13

Gift for Prizes.

Joshua Montgomery Sears Jr. Memorial,	1,500.00		
			<u>\$32,341.13</u>
Tuition fees,	113,555.00		
Sale of pamphlets,	20.00		
			<u><u>\$145,916.13</u></u>

EXPENDITURE

From Funds and Gifts.

James Coolidge Carter Loan,	\$1,425.00		
George Fisher Scholarship,	150.00		
Hughes Loan,	775.00		
Harry Milton Levy Loan,	90.00		
Scholarship Money Returned Loan,	<u>2,270.00</u>		
Amount carried forward,			<u><u>\$4,710.00</u></u>

LAW SCHOOL (CONTINUED)

EXPENDITURE

Amount brought forward,		\$4,710.00
Dean's Office.		
Salaries,	\$761.76	
Services and wages,	544.10	
Stationery, postage, telephone and telegraph,	215.58	
Printing,	605.04	2,126.48
Scholarships from unrestricted income,		4,140.00
General.		
Salaries for instruction,	\$59,642.86	
Services and wages,	11,970.55	
Equipment and supplies,	114.54	
Stationery, postage, telephone and telegraph,	664.74	
Printing,	20.25	
Books,	11,716.50	
Binding,	2,241.01	
Advertising,	135.00	
Proctors,	212.00	
Freight,	282.92	
Travelling expenses,	127.18	
Diplomas,	105.99	
Sundries,	178.23	87,411.77
Repairs and equipment, land and buildings,		2,246.35
Caretaking, land and buildings,		6,706.15
University charge.		
President's Office, salaries and expenses,	\$2,301.51	
Treasurer's Office, care of investments,	676.95	
Bursar's Office, collections and payments,	2,096.11	
Medical Adviser, salary and expenses,	467.13	
Inspector of Grounds and Buildings, salary and expenses,	511.40	
Publication Office, salary and expenses,	129.00	
Quinquennial Catalogue,	212.39	
Annual Catalogue,	251.62	
Labor, etc.,	300.47	
Watchmen,	177.14	
Regent's Office, salary and expenses,	270.08	7,393.80
Phillips Brooks House, Schedule 28,	\$254.74	
Hemenway Gymnasium, Schedule 29,	2,077.32	2,332.06
		\$117,066.61
General Surplus, made up as follows:		
Restricted Income unused, added to Funds and Gifts,	\$3,785.74	
Surplus, carried to General Suspense,	25,063.78	28,849.52
		\$145,916.13

NOTE.—Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

MEDICAL SCHOOL

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of Funds for Instruction and General Purposes.

Anonymous Fund in the Department of Theory and Practice,	\$414.56	
Edward M. Barringer (part),	710.88	
Robert C. Billings,	4,000.00	
John B. and Buckminster Brown,	974.12	
Bullard Professorship of Neuropathology,	2,356.56	
John C. Cutter Bequest,	388.48	
Calvin and Lucy Ellis (part),	14,331.88	
Samuel E. Fitz,	73.44	
Henry Harris ($\frac{1}{2}$ income),	598.78	
Harvard Medical Alumni,	200.04	
Hersey Professorship ($\frac{2}{5}$ income),	323.48	
George Higginson,	4,206.48	
John Homans Memorial,	2,088.20	
Jackson Professorship of Clinical Medicine,	2,767.72	
Hamilton Kuhn Memorial,	7,462.24	
William O. Moseley,	2,136.64	
New subscription,	1,554.00	
Lyman Nichols,	400.80	
George F. Parkman, Medical Fund,	218.40	
Henry L. Pierce (Residuary),	1,476.64	
John D. Rockefeller,	40,000.00	
Dr. Ruppaner,	373.44	
George C. Shattuck,	3,221.50	
James Stillman Professorship,	4,699.28	
Mary W. Swett,	630.60	
Samuel W. Swett,	800.00	
Quincy Tufts,	80.00	
Henry Willard Williams,	1,809.80	\$98,297.96

Income of Fellowship Funds.

Austin Teaching Fellowships,	\$3,000.00	
Charles Follen Folsom Memorial,	507.72	
George Cheyne Shattuck Memorial,	223.40	
Charles Eliot Ware "	240.32	
John Ware "	221.08	4,192.52

Income of Funds and Gifts for Scholarships and Aids.

Edward M. Barringer (part),	\$500.00	
Lucius F. Billings,	217.52	
James Jackson Cabot,	253.64	
David Williams Cheever,	238.48	
Amounts carried forward,	\$1,209.64	\$102,490.48

MEDICAL SCHOOL (CONTINUED)

INCOME

Amounts brought forward, \$1,209.64 \$102,490.48

Income of Funds and Gifts for Scholarships and Aids
(continued).

Aesculapian Club Gift,	150.00	
Cotting Gift (interest),	132.92	
Orlando W. Doe,	121.28	
Joseph Eveleth (part),	600.00	
John Foster,	126.84	
Lewis and Harriet Hayden,	233.56	
William Hilton (part),	450.00	
Claudius M. Jones,	271.20	
Alfred Hosmer Linder,	229.68	
Loan Fund Medical School Class of 1879 (Gift),	366.79	
James Ewing Mears (Gift),	225.00	
Joseph Pearson Oliver,	364.32	
Charles B. Porter,	237.96	
Francis Skinner,	214.84	
Charles Pratt Strong,	215.40	
Isaac Sweetser,	272.64	
John Thomson Taylor,	225.12	
Edward Wigglesworth,	230.68	5,877.87

Income of Prize Funds.

Ward Nicholas Boylston,	\$175.44	
William H. Thorndike,	362.52	537.96

Income of Sundry Funds and Gifts for special purposes.

Anatomical Research Gift,	\$100.00	
Edward Austin (Bacteriological Laboratory),	470.20	
J. Ingersoll Bowditch,	264.04	
Boylston, for Medical Books,	67.52	
Caroline Brewer Croft (part). Gifts,	\$700.00	
Interest,	2,170.36	2,870.36
George Fabyan Foundation for Comparative Pathology. Interest,	\$8,563.80	
Sales,	538.19	9,101.99
Charles F. Farrington,	2,021.28	
F. B. Greenough (for surgical research),	200.40	
Henry Jackson Endowment,	4,128.16	
Walter Augustus Lecompte Professorship of Otology,	2,094.96	
Harriet Newell Lowell,	143.96	
Medical Library,	93.64	
Proctor, for the study of Chronic Diseases,	2,270.20	

Amounts carried forward, \$23,826.71 \$108,906.31

MEDICAL SCHOOL (CONTINUED)

INCOME

Amounts brought forward, \$23,826.71 \$108,906.31

Income of Sundry Funds and Gifts (*continued*).**Henry Francis Sears** Fund for Pathology.

Gift, \$400.00
Interest, 1,412.44 1,812.44

School of Comparative Medicine, 246.88

Surgical Laboratory.

Gifts, \$2,600.00
Interest, 225.32 2,825.32

Warren Fund for Anatomical Museum, 420.56

Edward Wigglesworth Professorship of Dermatology, 2,065.48

Gifts for present use.

Gifts, \$17,288.56
Interest, 148.30 17,436.86 48,634.25

Sale of heat and power, \$3,541.63

Grading Medical School grounds, 436.28

Repayment of appropriation, 100.00

Repayment for work done by Pathological Laboratory, 500.00

Sale of duplicate books, 80.50 4,658.41

Receipts from students.

Tuition Fees.

Regular courses, \$54,782.50

Graduate courses, 3,605.77

Dental students, 7,000.00

Summer courses, 2,487.28

Division of Medical Science.

1908-09, \$360.00

1909-10, 445.00 805.00

Special students, 360.00 \$69,040.55

Matriculation fees, 340.00

Examination fees, 138.00

Laboratory fees and supplies.

Anatomy, \$884.00

Comparative Anatomy, 378.75

Chemistry, 885.04

Clinical Laboratory, 30.77

Histology, 315.00

Physiology, 428.63

Operative Surgery, 159.00

Surgical Technique, 177.00 3,258.19

Use of microscopes, 82.90

Fines, 33.75 72,893.39

Amount carried forward, \$235,092.36

MEDICAL SCHOOL (CONTINUED)

INCOME

Amount brought forward,		\$235,092.36	
General Deficit, made up as follows:			
Advance to Fund, carried to General Suspense, . .	\$19		
Deficit, met by an advance from General Investments, carried to General Suspense,	25,363.82		
		\$25,364.01	
Less Restricted Income unused, added to Funds and Gifts,	820.82	24,543.19	
			\$259,635.55
Balance deficit August 1, 1909,	\$11,799.47		
Deficit from operations of the year,	25,363.82		
		\$37,163.29	
Less Transferred to Henry L. Pierce (Residuary) Fund,	\$11,799.47		
Balances of appropriations unused,	6,775.52	18,574.99	
Net deficit June 30, 1910, as per Schedule 6, . .		\$18,588.30	

NOTE.—Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

EXPENDITURE

From Fellowship Funds and Gifts.

George Cheyne Shattuck Memorial,	\$225.00	
Charles Eliot Ware Memorial,	250.00	
John Ware Memorial,	225.00	\$700.00

From Scholarship and Aid Funds and Gifts.

Edward M. Barringer (part),	\$500.00	
Lucius F. Billings,	225.00	
James Jackson Cabot,	275.00	
David Williams Cheever,	250.00	
Cotting Gift,	125.00	
Orlando W. Doe,	100.00	
Joseph Eveleth (part),	600.00	
John Foster,	150.00	
Lewis and Harriet Hayden,	225.00	
William Hilton (part),	450.00	
Claudius M. Jones,	250.00	
Alfred Hosmer Linder,	250.00	
Loan Fund Medical School Class of 1879, . . .	58.76	
James Ewing Mears,	225.00	
Joseph Pearson Oliver,	400.00	
Charles B. Porter,	250.00	
Francis Skinner,	219.58	
Charles Pratt Strong,	225.00	
Amounts carried forward,	\$4,778.34	\$700.00

MEDICAL SCHOOL (CONTINUED)

EXPENDITURE

Amounts brought forward	\$4,778.34	\$700.00
From Scholarship and Aid Funds and Gifts (<i>continued</i>).		
Isaac Sweetser ,	250.00	
John Thomson Taylor ,	250.00	
Edward Wigglesworth ,	250.00	5,528.34
From Prize Fund.		
Boylston Prize expenses,		6.25
From Sundry Funds and Gifts for special purposes.		
Anatomical Research Gifts,	\$280.18	
Edward Austin (Bacteriological Laboratory), .	922.52	
Robert C. Billings , Journal of Medical Research, .	1,100.00	
J. Ingersoll Bowditch , Physiology,	270.88	
Boylston , Medical Books,	82.79	
Caroline Brewer Croft (part).		
Cancer investigations,	\$6,022.47	
Less paid for salaries,	2,500.00	3,522.47
George Fabyan Foundation for Comparative Pathology,	\$7,502.61	
Less paid for salaries,	5,300.00	2,202.61
F. B. Greenough for surgical research,	520.00	
Henry Jackson Endowment.		
Warren Anatomical Museum,	\$4,334.38	
Less paid for salaries,	2,500.00	1,834.38
Walter Augustus Lecompte Professorship of Otology,	\$2,333.74	
Less paid for salaries,	1,700.00	633.74
Harriet Newell Lowell ,	1,171.20	
Medical Library,	110.57	
Proctor , for the study of Chronic Diseases,	\$4,710.56	
Less paid for salaries,	200.00	4,510.56
Henry Francis Sears Fund for Pathology, .	1,801.13	
Surgical Laboratory,	1,401.47	
Edward Wigglesworth Professorship of Dermatology,	\$1,940.00	
Less paid for salaries,	1,500.00	440.00
Sundry Gifts (balances),	\$18,676.32	
Less paid for salaries,	7,200.00	11,476.32
Aesculapian Club Gift,	13.80	
Books, from proceeds of sale of duplicates,	39.04	32,333.66
Appropriations.		
Advertising and catalogues,	\$1,356.47	
Anatomy,	1,560.19	
Comparative Anatomy, laboratory fees,	1,971.23	
" " lenses,	1,620.00	
Amounts carried forward,	\$6,507.89	\$38,568.25

MEDICAL SCHOOL (CONTINUED)

EXPENDITURE

Amounts brought forward,	\$6,507.89	\$38,568.25
Appropriations (<i>continued</i>).		
Books and service for the library,	3,506.81	
Physiology,	2,367.19	
Comparative Physiology, general,	502.61	
" " laundry and telephone, . .	3.28	
Biological Chemistry, laboratory fees,	1,828.82	
" " laundry and telephone, . .	15.99	
Bacteriology,	698.95	
Preventive Medicine and Hygiene, general,	2,499.26	
" " " laundry and telephone,	29.39	
Materia Medica and Therapeutics,	797.34	
Theory and Practice of Physic,	1,330.18	
Clinical Medicine,	20.00	
Pediatrics,	62.20	
Surgery, general,	447.48	
Obstetrics,	50.00	20,667.39
Dean's Office.		
Salaries,	\$2,000.00	
Services and wages,	1,923.71	
Equipment and supplies,	13.90	
Printing,	556.15	4,493.76
General.		
Salaries for instruction,	\$123,584.33	
Summer courses.		
Fees repaid to instructors,	8,406.58	
Graduate courses.		
Fees repaid to instructors,	3,605.77	
Services and wages,	8,825.11	
Equipment and supplies,	176.81	
Stationery, postage, telephone and telegraph, . . .	1,869.30	
Printing,	102.25	
Water, heat, light, power and protection,	20,352.28	
Equipment, department Hygiene,	2,741.71	
" " Pathology,	304.29	
Laundry,	468.36	
Advertising,	63.00	
Boston Medical Library,	100.00	
Diplomas,	54.48	
Travelling expense,	54.20	
Medical School models,	26.59	
Clinic,	85.92	
Sundries,	187.35	
Repairs and equipment, land and buildings,	6,702.14	
Caretaking, land and buildings,	9,371.68	187,082.15
Amount carried forward,		\$250,811.55

MEDICAL SCHOOL (CONTINUED)

EXPENDITURE

Amount brought forward, \$250,811.55

Retiring allowance, 750.00

Balance of payments on an annuity, Schedule 31, 365.72

Interest on advances, 374.25

University charge:

President's Office, salaries and expenses, \$847.92

Treasurer's Office, care of investments, 2,725.87

Bursar's Office, collections and payments, 1,893.49

Inspector of Grounds and Buildings, salary and expenses, 995.17

Publication Office, salary and expenses, 253.12

Quinquennial Catalogue, 242.74

Annual Catalogue, 375.72 7,334.03

\$259,635.55

SCHEDULE 15

DENTAL SCHOOL

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of Funds and Gifts.

Dental School balance (interest), \$371.88

Dental School Endowment, 205.16

Harvard Dental Alumni Endowment, 213.24

Joseph Warren Smith Jr., 294.96

Henry C. Warren Endowment, 920.00 \$2,005.24

Gifts for immediate use.

Surgical instruments, \$50.00

Dedication of Dental School, 640.00

Dental School Research Fund, 25.00 715.00

Receipts from students.

Tuition fees, regular courses, \$15,640.00

Less transferred to Medical School, 7,000.00 \$8,640.00

Tuition fees, evening courses, 1,200.00

Examination fees, 33.00

Chemistry, breakage and supplies, 556.58 10,429.58

Fees from Infirmary, 7,468.43

Sale of gold, platinum, and sweepings, \$637.46

" scraps and old materials, 278.69 916.15

Tickets, Alumni Dinner, 414.00

Sundry receipts, 20.25

Amount carried forward, \$21,968.65

DENTAL SCHOOL (CONTINUED)

INCOME

Amount brought forward,		\$21,968.65
General Deficit made up as follows :		
Unrestricted principal of Harriet Newell Lowell Fund,	\$1,000.00	
Deficit, met by		
Accumulated income,	\$9,297.26	
An advance from General Investments, carried to General Suspense, 1,672.67	10,969.93	
	<u>\$11,969.93</u>	
Less Restricted Income unused, added to Funds and Gifts,	49.16	11,920.77
		<u>\$33,889.42</u>

NOTE. — Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

EXPENDITURE

From Funds and Gifts.

Harriet Newell Lowell (salaries),	\$1,000.00	
Gift for surgical instruments,	25.84	\$1,025.84

Dean's Office.

Salaries,	\$800.00	
Equipment and supplies,	28.11	
Stationery, postage, telephone and telegraph, . . .	353.15	
Printing,	471.23	1,652.49

General.

Salaries for instruction,	\$8,001.56
Salaries, evening courses,	506.20
Services and wages,	2,988.43
Equipment and supplies,	7,539.90
Stationery, postage, telephone and telegraph, . . .	524.93
Printing,	15.75
Books,	32.50
Water, heat, light, power and protection,	456.27
Advertising,	612.96
Equipment of new building,	716.38
Dedication expenses,	2,420.75
Binding Dental Journals,	106.35
Mechanical Department sundries,	259.00
Moving expenses,	189.10
Laundry,	502.80
Quinquennial Catalogue,	56.00
Chemistry Department laundry,	15.70
Diplomas,	18.16

Amounts carried forward,	\$24,962.74	\$2,678.33
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DENTAL SCHOOL (CONTINUED)

EXPENDITURE

Amounts brought forward, \$24,962.74 \$2,678.33

General (*continued*).

Expenses, New Building Fund Committee,	108.83	
Rent of piano,	81.00	
Photographs and lantern slides,	24.00	
Insurance,	16.00	
Legal services,	25.00	
Sundries,	79.41	25,296.98
Repairs and equipment, land and buildings,		1,433.76
Caretaking, land and buildings,		3,453.41

University charge.

President's Office, salaries and expenses,	\$242.27	
Treasurer's Office, care of investments,	83.03	
Bursar's Office, collections and payments,	364.99	
Inspector of Grounds and Buildings, salary and expenses,	142.76	
Publication Office, salary and expenses,	79.68	
Quinquennial Catalogue,	30.34	
Annual Catalogue,	83.87	1,026.94
		<u>\$33,889.42</u>

SCHEDULE 16

BUSSEY INSTITUTION

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of Funds.

Bussey Institution balance (interest),	\$991.16	
Bussey Trust (part),	9,950.92	\$10,942.08
Gifts for present use,		100.00
Sale of wood, hay, and sundries,	\$522.73	
Board of animals,	329.65	
Use of houses by College officers,	1,365.00	
Rent of Antitoxin stable,	756.24	
Fees,	197.50	3,171.12
		<u>\$14,213.20</u>
Deficit, met by accumulated income, carried to General Suspense, .		12,383.47
		<u>\$26,596.67</u>

NOTE. — Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

BUSSEY INSTITUTION (CONTINUED)

EXPENDITURE

Salaries,	\$8,300.00	
Services and wages,	3,060.13	
Equipment and supplies,	3,192.90	
Stationery, postage, telephone and telegraph,	80.03	
Printing,	86.35	
Books,	501.79	
Binding,	66.45	
Sundries,	117.92	
Repairs and equipment, land and buildings,	9,630.79	
Caretaking, land and buildings,	858.34	\$25,894.70
University charge.		
Treasurer's Office, care of investments,	\$274.39	
Bursar's Office, collections and payments,	167.99	
Inspector of Grounds and Buildings, salary and ex-		
penses,	253.60	
Publication Office, salary and expenses,	5.99	701.97
		<u>\$26,596.67</u>

SCHEDULE 17

ARNOLD ARBORETUM

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of Funds and Gifts.

Arnold Arboretum,	\$5,161.20	
James Arnold,	6,482.44	
Arboretum Construction Gifts (interest),	1,284.72	
Robert Charles Billings (part),	465.00	
William L. Bradley,	890.04	
Francis Skinner,	800.00	
Bussey, for the Arnold Arboretum,	92.32	
Gift for books (interest on balance),	10 23	\$15,185.95

For botanical exploration in China.

Interest,	\$99.63	
Sale of photographs,	580.85	
Sale of botanical material,	773.31	1,453.79
Gifts for books,	\$1,500.00	
Gift for library,	5,000.00	
Gifts for other present uses,	21,110.00	
Sale of grass and materials,	857.20	
Sale of publications,	150.00	28,617.20
Amount carried forward,		\$45,256.94

ARNOLD ARBORETUM (CONTINUED)

INCOME

Amount brought forward, \$45,256.94

General Deficit, made up as follows :

Principal of Sundry Funds and Gifts,	\$4,133.83	
Less Surplus added to Arboretum Construction		
Gifts,	1,211.35	2,922.48
		<u>\$48,179.42</u>

NOTE. — Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

EXPENDITURE

From William L. Bradley Fund, bibliography (part), \$3,140.76

From Chinese Exploration Gifts.

Exploration in Western China,	\$41.74	
“ Northern “	2,951.20	
Third expedition,	3,393.55	
Carbon prints,	484.58	6,871.07

Books from gifts, 3,300.18

General.

Salaries,	\$5,800.00	
Services and wages,	6,317.15	
Equipment and supplies,	3,140.69	
Stationery, postage, telephone and telegraph, . . .	454.35	
Printing,	38.20	
Labor,	11,799.70	
Water, heat, light, power and protection,	744.42	
Repairs and equipment, land and buildings,	964.01	
Rent of building,	750.00	
Bradley Bibliography of Trees,	3,228.61	
Expenses of expeditions for collecting,	420.46	
Freight, express, etc.,	407.28	
Sundries,	29.00	34,093.87
		<u>\$47,405.88</u>

University charge.

Treasurer's Office, care of investments,	\$362.85	
Bursar's Office, collections and payments,	355.00	
Inspector's Office, salary and expenses,	54.83	
Publication Office, salary and expenses, . . . . .	.86	773.54
		<u>\$48,179.42</u>

BOTANIC GARDEN

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of Funds.

Botanic Department ($\frac{5}{8}$ income),	\$994.50	
Lowell , for a Botanic Garden,	2,693.28	
John L. Russell ($\frac{1}{4}$ income),	20.00	\$3,707.78

Gifts.

For cases (interest),	\$14.61	
For sugar-cane investigation (interest),	15.40	
For immediate use,	8,150.00	8,180.01
Laboratory fees in Botany 1,	\$241.50	
Material supplied Radcliffe College,	400.00	
Use of house,	262.50	904.00
		<u>\$12,791.79</u>

EXPENDITURE

Services and wages,	\$150.00	
Labor,	4,235.75	
Equipment and supplies,	676.72	
Stationery, postage, telephone and telegraph,	43.68	
Printing,	3.17	
Water, heat, light, power and protection,	883.16	
Repairs and equipment, land and buildings,	166.46	
Taxes,	189.00	
Express and cartage,	115.87	
Sundries,	2.98	\$6,466.79
Interest on advances,		185.75

University charge.

Treasurer's Office, care of investments,	\$86.65	
Bursar's Office, collections and payments,	60.96	
Publication Office, salary and expenses, . . . . .	.50	148.11
		<u>\$6,800.65</u>

General surplus, made up as follows:

Restricted Income unused, added to Funds and Gifts,	\$30.01	
Surplus, carried to General Suspense,	5,961.13	5,991.14
		<u>\$12,791.79</u>

NOTE. — Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

BOTANICAL MUSEUM
INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Gifts for present use.

Gift for Botanical Museum.	\$1,500.00	
Anonymous gift for books,	69.10	<u>\$1,569.10</u>

EXPENDITURE

Services and wages,	\$272.00	
General expenses,	900.00	
Telephone,	23.51	
Printing,	8.25	
Books,	71.35	
Collections,	200.00	
Repairs,	12.90	
Express,	1.55	<u>\$1,489.56</u>

University charge.

Bursar's Office, collections and payments,	\$12.32	
Publication Office, salary and expenses,	1.30	13.62

\$1,503.18

Surplus carried to General Suspense,	65.92	
		<u>\$1,569.10</u>

NOTE.—Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

GRAY HERBARIUM
INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of Funds.

Robert Charles Billings,	\$600.00	
Gray Herbarium balance (interest),	334.52	
Asa Gray Memorial,	1,308.44	
Asa Gray Professorship of Systematic Botany,	858.04	
Herbarium,	826.24	
Sarah E. Potter Endowment,	7,788.04	
John L. Russell ($\frac{1}{3}$ income),	60.00	<u>\$11,775.28</u>
Asa Gray's copyrights,	961.72	
Gifts for immediate use,		1,537.00
Sale of card index,	\$1,684.65	
“ publications,	86.53	<u>1,771.18</u>
Amount carried forward,		<u>\$16,045.18</u>

GRAY HERBARIUM (CONTINUED)

INCOME

Amount brought forward,		\$16,045.18
General Deficit, made up as follows :		
Principal of the Asa Gray Professorship of Systematic Botany Fund,	\$40.42	
Deficit, met by accumulated income, carried to General Suspense,	1,583.40	1,623.82
		<u>\$17,669.00</u>

NOTE. — Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

EXPENDITURE

From **Asa Gray** Professorship of Systematic Botany Fund.

Salary of Asa Gray Professor (part),		\$898.46
Salaries,	\$5,591.96	
Services and wages,	2,601.19	
Equipment and supplies,	4,128.45	
Stationery, postage, telephone and telegraph,	100.21	
Printing,	997.19	
Books,	1,499.54	
Binding,	279.50	
Freight, express and sundries,	216.49	
Expedition to Newfoundland,	400.00	
Repairs and equipment, land and buildings,	364.76	
Caretaking, land and buildings,	205.05	16,384.34
		<u>\$17,282.80</u>

University charge.

Treasurer's Office, care of investments,	\$157.05	
Bursar's Office, collections and payments,	190.44	
Inspector of Grounds and Buildings, salaries and expenses,	35.27	
Publication Office, salaries and expenses,	3.44	386.20
		<u>\$17,669.00</u>

OBSERVATORY

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of Funds and Gifts.

Advancement of Astronomical Science (1901), . .	\$1,148.80	
Advancement of Astronomical Science (1902), . .	905.00	
Thomas G. Appleton,	200.00	
J. Ingersoll Bowditch,	100.00	
Uriah A. Boyden,	8,000.00	
Charlotte Harris,	80.00	
Haven,	1,800.00	
James Hayward,	840.00	
Observatory Endowment,	2,000.00	
Paine Professorship,	2,000.00	
Robert Treat Paine,	10,957.28	
Edward B. Phillips,	4,411.76	
Josiah Quincy,	660.44	
James Savage ($\frac{1}{4}$ net income),	345.00	
David Sears,	1,727.36	
Augustus Story,	535.20	
Bond Gifts (interest),	50.96	\$35,761.80

Mrs. Henry Draper, gift for special research (additional),	\$4,400.00	
Interest,	72.84	4,472.84
Gifts for present use,		3,000.00
Use of house by College officer,	\$600.00	
Sale of Annals,	29.45	
“ grass,	25.00	654.45
		<u>\$43,889.09</u>

General Deficit, made up as follows :

Advance to Fund, carried to General Suspense, . .	\$1,452.33
Balances of sundry accounts used,	2,573.85
Deficit met by unrestricted principal of Advancement of Astronomical Science (1901) Fund,	10,835.13
	<u>\$14,861.31</u>

Less Restricted Income unused, added to Funds and

Gifts,	1,524.12	13,337.19
		<u>\$57,226.28</u>

NOTE. — Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

OBSERVATORY (CONTINUED)

EXPENDITURE

From Advancement of Astronomical Science Fund (1901), \$1,515.50

From Advancement of Astronomical Science Fund (1902), 794.42

From Uriah A. Boyden Fund.

Salaries,	\$3,941.60	
Services and wages,	1,213.93	
Equipment and supplies,	1,021.24	
Books,	69.15	
Expedition to Peru,	2,522.01	
Interest on advances,	684.40	9,452.33

From Draper Memorial.

Salaries,	\$2,750.00	
Services and wages,	1,578.94	
Equipment and supplies,	155.67	
Expedition to Peru,	1,746.34	6,230.95

Salaries,	14,823.80	
Services and wages,	8,827.22	
Equipment and supplies,	1,829.31	
Stationery, postage, telephone and telegraph,	780.99	
Printing,	320.29	
Binding,	537.49	
Books,	315.36	
Repairs and equipment, land and buildings,	988.31	
Caretaking, land and buildings,	2,674.27	
Taxes,	224.70	
Expedition to South Africa,	1,441.58	
Printing Annals,	4,095.75	
Use of house,	82.50	
Freight,	359.34	
Sundries,	23.08	\$55,317.19

University charge.

Treasurer's Office, care of investments,	\$866.50	
Bursar's Office, collections and payments,	292.57	
Inspector of Grounds and Buildings, salary and expenses,	77.90	
Publication Office, salary and expenses,	672.12	1,909.09
		<u>\$57,226.28</u>

MUSEUM OF COMPARATIVE ZOÖLOGY

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of Funds.

Museum of Comparative Zoölogy balance (interest),	\$970.40	
Agassiz Memorial,	11,917.32	
Virginia Barret Gibbs Scholarship,	236.88	
Gray Fund for Zoölogical Museum,	2,000.00	
Sturgis Hooper,	4,330.44	
Humboldt,	309.64	
Willard Peele Hunnewell,	200.00	
Permanent Fund for Museum of Zoölogy,	4,698.76	
Henry L. Pierce, Residuary (part),	4,609.09	
Teachers' and Pupils',	303.76	
Maria Whitney,	116.40	\$29,692.69
Gift for present use,		212.00
Use of lecture rooms by Radcliffe College,	\$700.00	
Sale of publications,	113.82	
Sale of specimens,	20.00	
Lost books,	5.00	838.82
		<u>\$30,743.51</u>

General Deficit, made up as follows :

Advance to Fund, carried to General Suspense, . .	\$830.56	
Accumulated Income of Sturgis Hooper Fund, . .	154.60	
Deficit, met by accumulated income, carried to		
General Suspense,	5,771.15	
	<u>\$6,756.31</u>	
Less Restricted Income unused, added to Funds and		
Gifts,	116.40	6,639.91
		<u>\$37,383.42</u>

NOTE. — Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

EXPENDITURE

From **Sturgis Hooper** Fund.

Salary of Sturgis Hooper Professor, \$5,000.00	
Expenses,	302.48
	<u>\$5,302.48</u>

From **Virginia Barret Gibbs** Scholarship Fund.

Scholarship,	250.00	\$5,552.48
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Salaries,	\$10,850.00	
Services and wages,	5,058.40	
Equipment and supplies,	4,251.71	
Amounts carried forward,	\$20,160.11	\$5,552.48

MUSEUM OF COMPARATIVE ZOÖLOGY (CONTINUED)

EXPENDITURE

Amounts brought forward,	\$20,160.11	\$5,552.48
Stationery, postage, telephone and telegraph,	128.05	
Printing,	2,640.07	
Books,	1,964.45	
Water, heat, light, power and protection, . . \$5,484.69		
Less adjustment of prior year,	<u>1,921.25</u>	3,563.44
Repairs and equipment, land and buildings,	709.40	
Binding,	927.44	
Collections,	4,874.39	
Freight and cartage,	395.67	
Boarding and lodging of students at Bermuda Biological Station,	307.10	
Sundries,	<u>57.07</u>	35,727.19
University charge.		
Treasurer's Office, care of investments,	\$691.39	
Bursar's Office, collections and payments,	303.06	994.45
		<u>\$42,274.12</u>
Less the following items transferred :		
To the College, Schedule 8.		
Heating and service,	\$3,106.25	
Librarian's salary (part),	250.00	
Watchman (part),	240.00	
Publishing contributions from the Laboratories of Geography and Zoölogy,	<u>300.00</u>	
	\$3,896.25	
To the University, Schedule 7.		
Total University charge,	994.45	4,890.70
		<u><u>\$37,383.42</u></u>

SCHEDULE 23

PEABODY MUSEUM OF AMERICAN ARCHAEOLOGY
AND ETHNOLOGY

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of Funds.

Hemenway Fellowship,	\$507.40
Peabody Building,	1,296.04
Peabody Collection,	2,163.48
Peabody Professor,	2,163.48
Thaw Fellowship,	<u>1,084.17</u>
Amount carried forward,	\$7,214.57

PEABODY MUSEUM (CONTINUED)

INCOME

Amount brought forward, \$7,214.57

Income of Funds (*continued*).

Henry C. Warren Exploration,	400.72	
Susan Cornelia Warren ,	200.00	
Robert C. Winthrop Scholarship,	239.80	
Huntington Frothingham Wolcott ,	800.84	\$8,855.93

Sales of publications, 27.26

Use of heating plant, 75.00

Gifts for present use, 1,190.00

\$10,148.19

General Deficit, made up as follows :

Advances to Funds carried to General Suspense, . . \$225.28

Accrued income of Funds and Gifts, 666.62

Deficit met by an advance from General Investments, carried to General Suspense, 330.36

1,222.26
\$11,370.45

NOTE. — Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

EXPENDITURE

Anonymous Fellowship in Central American Archaeology,	\$600.00	
Hemenway Fellowship,	550.00	
Thaw Fellowship,	896.78	
From Henry C. Warren Fund, explorations, . . .	493.60	
Robert C. Winthrop Scholarship,	170.00	
From Huntington Frothingham Wolcott Fund, specimens,	971.98	\$3,682.36
Salary of Professor and Curator,	\$242.47	
Services and wages,	3,471.22	
Equipment and supplies,	310.36	
Stationery, postage, telephone and telegraph,	142.89	
Printing,	45.40	
Books,	618.25	
Binding,	47.10	
Explorations,	775.00	
Freight,	219.43	
Sundries,	151.10	
Repairs and equipment, land and buildings,	1,632.68	
Caretaking, land and buildings,	1,232.95	8,888.85
Interest on advances,		32.19

University charge.

Treasurer's Office, care of investments, \$194.96

Bursar's Office, collections and payments, 96.20

Amounts carried forward, \$291.16 \$12,603.40

PEABODY MUSEUM (CONTINUED)

EXPENDITURE

Amounts brought forward,	\$291.16	\$12,603.40
University charge (<i>continued</i>).		
Inspector of Grounds and Buildings, salary and expenses,	160.65	
Publication Office, salary and expenses,	1.90	
Watchmen,	54.75	508.46
		<u>\$13,111.86</u>
Less amounts transferred.		
Caretaking, land and buildings,	\$1,232.95	
University charge,	508.46	1,741.41
		<u>\$11,370.45</u>
The above amounts are transferred as follows :		
90 % to University, Schedule 7,	\$1,567.27	
10 % to College, Schedule 8,	174.14	
	<u>\$1,741.41</u>	

SCHEDULE 24

SEMITIC MUSEUM

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Gifts for Semitic Collection.		
Gift,	\$5,000.00	
Interest,	117.77	\$5,117.77
		<u></u>
Gifts for excavations in Palestine.		
Gift,	\$10,000.00	
Interest,	493.54	10,493.54
		<u>\$15,611.31</u>
General Deficit, made up as follows :		
Deficit, met by unrestricted principal of Gifts for excavations in Palestine,	\$7,542.06	
Less Restricted Income unused, added to Funds and Gifts,	672.78	6,869.28
		<u>\$22,480.59</u>

NOTE.—Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

SEMITIC MUSEUM (CONTINUED)

EXPENDITURE

From gifts for Semitic Collection,	\$4,444.99	
From gifts for excavations in Palestine,	18,035.60	\$22,480.59
Curator,	\$500.00	
Printing,	2.95	
Repairs and equipment, land and building,	42.34	
Caretaking, land and building,	1,006.20	
Use of Peabody Museum heating plant,	75.00	1,626.49

University charge.

Treasurer's Office, care of investments,	\$9.03	
Bursar's Office, collections and payments,	153.80	
Inspector of Grounds and Buildings, salary and expenses,	77.66	
Publication Office, salary and expenses, . . . . .	.46	
Watchmen,	26.47	267.42
		<u>\$24,374.50</u>

Less amounts transferred.

General expenses,	\$1,626.49	
University charge,	267.42	1,893.91
		<u>\$22,480.59</u>

The above amounts are transferred as follows :

70% to University, Schedule 7,	\$1,325.74
30% to Divinity School, Schedule 12,	568.17
	<u>\$1,893.91</u>

SCHEDULE 25

GERMANIC MUSEUM

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of Funds and Gifts.

Emperor William,	\$1,053.40	
Germanic Museum balance (interest),	11.84	
Germanic Museum,	200.27	
Germanic Museum Endowment,	1,270.23	\$2,535.74
Sale of Handbooks,		37.73
		<u>\$2,573.47</u>

GERMANIC MUSEUM (CONTINUED)

EXPENDITURE

From unrestricted gift,		\$169.64
Collection charges on cheque in payment of gift,		50.00
General.		
Collections,	\$441.54	
Equipment and supplies,	5.41	
Printing,	25.68	
Repairs and equipment, land and building,	32.09	
Caretaking, land and building,	825.96	1,330.68
University charge.		
Treasurer's Office, care of investments,	\$23.47	
Bursar's Office, collections and payments,	12.72	
Inspector of Grounds and Buildings, salary and expenses,	19.40	
Publication Office, salary and expenses,	4.04	
Watchmen,	6.61	66.24
		\$1,616.56
Less University charge transferred to University, Schedule 7,		66.24
		\$1,550.32
General Surplus made up as follows :		
Restricted Income unexpended, added to Funds and Gifts,	\$1,050.59	
Less Deficit in the General Account, paid from accumulated income,	27.44	1,023.15
		\$2,573.47

NOTE. — Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

SCHEDULE 26

WILLIAM HAYES FOGG ART MUSEUM

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of Funds.

William Hayes Fogg Art Museum balance (interest),	\$19.52	
William Hayes Fogg,	2,000.00	
Gray Fund for Engravings,	643.36	
William M. Prichard,	706.80	
John Witt Randall,	1,408.24	
Mary R. Searle,	82.32	\$4,860.24
Amount carried forward,		\$4,860.24

WILLIAM HAYES FOGG ART MUSEUM (CONTINUED)

INCOME

Amount brought forward,		\$4,860.24
Sale of photographs and catalogues,	\$31.65	
For work in connection with photographs sold,	11.48	
Gifts for special exhibit,	57.30	
Gift for paintings,	4,300.00	4,400.43
		<u>\$9,260.67</u>
General Deficit, made up as follows :		
Principal and accumulated income of Sundry Funds,	\$9,248.88	
Deficit, met by accumulated income, carried to		
General Suspense,	472.18	9,721.06
		<u>\$18,981.73</u>

NOTE. — Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

EXPENDITURE

From the following Funds :

Gray Fund for Engravings.

Curator,	\$250.00	
Collections,	317.71	
Expenses,	71.68	\$639.39

William M. Prichard, collections, 3,465.48

John Witt Randall.

Curator,	\$250.00	
Expenses,	3,352.76	
Paintings,	4,200.00	7,802.76

Mary R. Searle, books, 23.71

From Gifts.

Paintings,	\$4,300.00	
Special Exhibit,	215.56	4,515.56

General.

Director,	\$500.00	
Services and wages,	1,386.61	
Equipment and supplies,	92.49	
Stationery, postage, telephone and telegraph,	74.22	
Printing,	47.65	
Repairs and equipment, building,	378.17	
Caretaking, building,	2,308.04	
Sundries,	55.69	4,842.87

University charge.

Treasurer's Office, care of investments,	\$115.53	
Bursar's Office, collections and payments,	97.64	
Inspector of Grounds and Buildings, salary and expenses,	57.82	
Publication Office, salary and expenses,	7.50	
Watchmen,	46.36	324.85

Amount carried forward, \$21,614.62

WILLIAM HAYES FOGG ART MUSEUM (CONTINUED)

EXPENDITURE

Amount brought forward,		\$21,614.62
Less amounts transferred.		
Caretaking, building,	\$2,308.04	
University charge,	324.85	2,632.89
		<u>\$18,981.73</u>
The above amounts are transferred as follows:		
10 % to University, Schedule 7,	\$263.29	
90 % to College, Schedule 8,	2,369.60	
	<u>\$2,632.89</u>	

SCHEDULE 27

APPLETON CHAPEL

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of Funds.		
Fund for Religious Services,	\$41.32	
Increase Sumner Wheeler,	2,000.00	
Edward Wigglesworth Memorial,	<u>6,000.00</u>	\$8,041.32
Use of Organ,		<u>12.01</u>
		\$8,053.33
Deficit, transferred.		
20 % to University, Schedule 7,	\$2,103.22	
80 % to College, Schedule 8,	<u>8,412.86</u>	10,516.08
		<u>\$18,569.41</u>

NOTE.—Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

EXPENDITURE

Preaching and morning services,	\$3,845.00	
Administrator,	400.00	
Organist and Choir-master,	2,000.00	
Choir,	2,711.00	
Equipment and supplies,	6,877.57	
Stationery, postage, telephone and telegraph,	26.80	
Printing,	94.35	
Repairs and equipment, land and buildings,	719.41	
Caretaking, land and buildings,	936.44	
Repairing and tuning organ,	145.36	
Music,	484.40	
Binding,	24.33	
Sundries,	<u>103.45</u>	\$18,368.11
Amount carried forward,		\$18,368.11

APPLETON CHAPEL (CONTINUED)

EXPENDITURE

Amount brought forward, \$18,368.11

University charge.

Treasurer's Office, care of investments,	\$37.91	
Bursar's Office, collections and payments,	73.38	
Inspector of Grounds and Buildings, salary and expenses,	41.72	
Publication Office, salary and expenses,	14.84	
Watchmen,	33.45	201.30
		<u>\$18,569.41</u>

SCHEDULE 28

PHILLIPS BROOKS HOUSE

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of Funds.

Phillips Brooks House Endowment,	\$420.28	
John W. and Belinda L. Randall,	259.96	
Ralph H. Shepard,	453.76	
Ralph Hamilton Shepard Memorial,	238.96	\$1,372.96

General Deficit, made up as follows:

Deficit met by principal and accrued income of		
Ralph Hamilton Shepard Memorial Fund,	\$267.74	
Less Restricted Income unused, added to Funds and Gifts,	259.96	7.78
		<u>\$1,380.74</u>

NOTE. — Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

EXPENDITURE

Secretary of Phillips Brooks House Association,	\$575.00	
Services and wages,	180.00	
Equipment and supplies,	2.00	
Printing,	16.00	
Books,	2.90	
Receptions,	442.23	
Services of matron,	75.00	
Rent of piano,	45.00	
Sundries,	42.61	
Repairs and equipment, land and buildings,	32.91	
Caretaking, land and buildings,	1,199.68	2,613.33
Amount carried forward,		<u>\$2,613.33</u>

PHILLIPS BROOKS HOUSE (CONTINUED)

EXPENDITURE

Amount brought forward,		\$2,613.33	
University charge.			
Treasurer's Office, care of investments,	\$32.49		
Bursar's Office, collections and payments,	21.61		
Inspector of Grounds and Buildings, salary and expenses,	43.32		
Watchmen,	34.73	132.15	
			\$2,745.48
Less amounts transferred.			
Repairs and equipment, land and buildings,	\$32.91		
Caretaking, land and buildings,	1,199.68		
University charge,	132.15	1,364.74	
			<u>\$1,380.74</u>
The above amounts are transferred as follows :			
10% to University, Schedule 7,	\$136.47		
Remainder, divided in proportion to the number of students :			
College, Schedule 8,	931.15		
Graduate School of Business Administration, Schedule 11,	26.04		
Divinity School, Schedule 12,	16.34		
Law School, Schedule 13,	254.74		
			<u>\$1,364.74</u>

SCHEDULE 29

HEMENWAY GYMNASIUM

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Fees for the use of			
Lockers, by students,	\$1,938.50		
Gymnasium, by graduates,	20.00	\$1,958.50	
Balance of appropriations returned,		194.75	
Deficit transferred to the following departments in proportion to the number of students.			
College, Schedule 8,	\$7,550.94		
Graduate School of Business Administration, Schedule 11,	213.78		
Divinity School, Schedule 12,	133.11		
Law School, Schedule 13,	2,077.32		
Episcopal Theological School,	108.90	\$10,084.05	
			<u>\$12,237.30</u>

HEMENWAY GYMNASIUM (CONTINUED)

EXPENDITURE

Salaries,	\$5,500.00	
Services and wages,	1,104.74	
Apparatus,	458.16	
Equipment and supplies,	25.68	
Stationery, postage, telephone and telegraph,	97.00	
Printing,	60.25	
Rent of piano,	36.00	
Photograph,	3.75	
Express, . . . . .	.85	
Repairs and equipment, land and building,	349.49	
Caretaking, land and building,	4,245.56	\$11,881.48
<hr/>		
University charge.		
Bursar's Office, collections and payments,	\$68.99	
Inspector of Grounds and Buildings, salary and expenses,	206.85	
Publication Office, salary and expenses,	9.48	
Watchmen,	70.50	355.82
		<hr/>
		<u>\$12,237.30</u>

SCHEDULE 30

STILLMAN INFIRMARY

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Income of Funds and Gifts.

Robert Charles Billings, for Stillman Infirmary,	\$2,422.24	
Free Bed Fund of the Class of 1868,	255.08	
" " for the Stillman Infirmary,	26.12	
Herbert Schurz Memorial Free Bed Fund,	145.32	
Stillman Infirmary Gift, interest,	297.24	
Henry P. Walcott,	128.16	\$3,274.16

Receipts from Students.

Infirmary annual fees,	\$14,484.00	
Receipts from patients,	5,114.40	19,598.40
		<hr/>
		<u>\$22,872.56</u>

STILLMAN INFIRMARY (CONTINUED)

EXPENDITURE

Services and wages,	\$6,723.66	
Equipment and supplies,	6,415.62	
Stationery, postage, telephone and telegraph,	268.76	
Printing,	4.10	
Sundries,	101.02	
Repairs and equipment, land and buildings,	756.99	
Caretaking, land and buildings,	5,859.50	\$20,129.65
Interest on advances,		69.93

University charge.

Treasurer's Office, care of investments,	\$74.01	
Bursar's Office, collections and payments,	328.59	
Medical Adviser, salary and expenses,	750.00	
Inspector of Grounds and Buildings, salary and expenses,	87.05	
Publication Office, salary and expenses, . . . . .	.64	
Labor, etc.,	117.72	1,358.01
		<u>\$21,557.59</u>

General Surplus, made up as follows :

Surplus, carried to General Suspense,	\$1,017.73	
Restricted Income unused, added to Funds and Gifts,	297.24	1,314.97
		<u>\$22,872.56</u>

NOTE. — Owing to the change in the closing date of the fiscal year, the income on Funds and Gifts has been reduced by approximately one-sixth.

SCHEDULE 31

FUNDS AND GIFTS FOR SPECIAL PURPOSES

INCOME AND EXPENDITURE

For the year ended June 30, 1910

INCOME

Gift for Lecture on Tropical Agriculture,		\$428.00
Anonymous Fund,		300.00
Gifts for Arnold Arboretum Building.		
Gifts,	\$41,000.00	
Interest,	262.85	41,262.85
Bussey Trust (part),		3,500.00
Gift from the Carnegie Foundation,		28,675.18
Class of 1834 Fund,		68.73
" 1842 "		4.28
" 1844 "		399.53
" 1846 "		526.32
" 1853 "		153.66
" 1856 "		300.00
Amount carried forward,		<u>\$75,618.55</u>

FUNDS AND GIFTS, ETC. (CONTINUED)

INCOME

Amount brought forward,	\$75,618.55	
Caroline Brewer Croft (part),	1,771.60	
Gifts for Dental School Building,	5,255.00	
Paul Dudley Fund,	161.60	
Calvin and Lucy Ellis Fund (part),	139.03	
“ “ “ Real Estate, Rents,	520.00	
Germanic Museum Building.		
Gift,	\$100,000.00	
Interest,	2,561.25	102,561.25
Wolcott Gibbs Memorial.		
Gifts,	\$92,405.00	
Interest,	1,311.64	93,716.64
Godkin Lecture Fund,	577.44	
Gurney Fund (part),	500.00	
Harvard Memorial Society (interest),	67.16	
Gift for Gray Herbarium (Kidder Wing),	11,000.00	
Professorship of Hygiene, 1899 Fund (part),	7,762.73	
“ “ 1902 “	1,865.41	
“ “ 1908 “	1,158.15	
Ingersoll Lecture Fund,	236.92	
Gifts for Lectures by Professor Joseph Bedier ,	200.00	
Gifts for Special Lecture by Professor Otto Jespersen ,	100.00	
Gifts for a new University Library Building (interest),	460.68	
Annals of Mathematics , Sales,	395.68	
William Belden Noble Lectures Fund.		
Interest,	\$1,036.12	
Sales,	10.69	1,046.81
Henry S. Nourse Fund (part),	1,000.60	
Robert Troup Paine ,	1,615.38	
George F. Parkman Medical Fund, sale of real estate,	8,728.00	
Gift for Pathological Laboratory (interest),	236.84	
Lectures on Political Economy Fund,	451.44	
Retiring Allowance Fund,	14,702.40	
Gift for Decorating front of the Nelson Robinson Jr. Hall (interest),	285.68	
Frederick Sheldon Fund (part),	11,803.74	
James Skillen Memorial Fund,	434.28	
George Smith Bequest,	14,719.00	
Gifts for Improvements and Additions to The Soldier's Field,	4,158.56	
Alexander W. Thayer Fund (part),	360.00	
John E. Thayer Fund, Quarterly Journal of Economics.		
Interest,	\$659.28	
Sales,	2,323.00	2,982.28
Charles Wilder Fund,	1,600.00	
Daniel Williams Fund,	657.00	
Sarah Winslow Fund,	191.92	
Amount carried forward,	\$369,041.77	

FUNDS AND GIFTS, ETC. (CONTINUED)

EXPENDITURE

Amount brought forward,	\$176,959.70	
Gordon McKay Endowment (part), legal expenses,	50.00	
William Belden Noble Lectures Fund,	250.00	
Henry S. Nourse Fund.		
Annuity,	\$1,000.00	
Insurance on house, . . . . .	.60	1,000.60
George F. Parkman Medical Fund, expenses,	146.60	
Gift for Pathological Laboratory, equipment,	111.04	
Lectures on Political Economy Fund,	200.00	
Retiring Allowance Fund,	12,230.76	
Gift for Decorating Front of Nelson Robinson Jr. Hall, . . .	4,367.25	
Nathaniel Ropes Scholarship (part), legal expenses,	100.78	
Frederick Sheldon Fund (part), legal expenses,	15,153.68	
James Skillen Memorial Fund, annuity,	800.00	
George Smith Bequest, annuities,	900.00	
Gifts for Improvements and Additions to The Soldier's Field.		
Construction Stadium,	\$13,130.84	
Interest on advances,	226.93	13,357.77
Alexander W. Thayer Fund, annuity,	360.00	
John E. Thayer Fund, Quarterly Journal of Economics, . . .	3,161.08	
Charles Wilder Fund, annuities,	1,940.00	
Daniel Williams Fund.		
Treasurer of Herring Pond Indians,	\$274.54	
Treasurer of Mashpee Indians,	411.78	686.32
Sarah Winslow.		
Teacher at Tyngsborough,	\$113.66	
Minister " "	113.66	
Commission on income, credited to University, . . .	4.80	232.12
Woodland Hill Fund.		
Taxes,	\$1,122.40	
Interest on advances,	245.04	1,367.44
		<u>\$233,375.14</u>
Less Balance of Annuity to Medical School, Schedule 14,	365.72	
		<u><u>\$233,009.42</u></u>

*Certificate of the Committee of the Overseers of Harvard College, for
examining the Accounts of the Treasurer*

The committee appointed by the Overseers of Harvard College to examine the accounts of the Treasurer for the year ending June 30, 1910, have, with the assistance of an expert chosen by them, examined and audited the Cash-book and Journal covering the period from August 1, 1909, to June 30, 1910, inclusive, and have seen that all the bonds, notes, mortgages, certificates of stock, and other evidences of property, which were on hand at the beginning of said year, or have been received by him during said year, are now in his possession, or are fully accounted for by entries made therein; they have also noticed all payments, both of principal and interest, indorsed on any of said bonds or notes, and have seen that the amounts so indorsed have been duly credited to the College.

They have in like manner satisfied themselves that all the entries for moneys expended by the Treasurer, or charged in his books to the College, are well vouched; such of them that are not supported by counter entries being proved by regular vouchers and receipts.

They have also seen that all the entries for said year are duly transferred to the Ledger, and that the accounts there are rightly cast, and correctly balanced.

(Signed)

STEPHEN M. WELD,	}	<i>Of the Committee on behalf of the Board of Overseers.</i>
ALLAN FORBES,		
JOHN L. SALTONSTALL,		
WILLIAM ENDICOTT, JR.		
RICHARD C. STOREY,		
WILLIAM C. ENDICOTT,		
ARTHUR LYMAN.		

Boston, January, 1911.

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Two or more entries on a page are indicated by a small figure at the right of the page number: 20³ indicates three entries on page 20.

Abbreviations are used as follows:—

<i>A.</i> ,	Arnold Arboretum;	<i>M.</i> ,	Medical School;
<i>B.</i> ,	Book Funds;	<i>M.S.U.</i> ,	Medical School Undertaking;
<i>Be.</i> ,	Beneficiary and Loan Funds;	<i>O.</i> ,	Observatory;
<i>C.</i> ,	College;	<i>P.</i> ,	Professorship Funds;
<i>D.</i> ,	Divinity School;	<i>Pr.</i> ,	Prize Funds;
<i>F.</i> ,	Fellowship Funds;	<i>S.</i> ,	Scholarship Funds;
<i>L.</i> ,	Law School;	<i>U.</i> ,	University.

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